

DEDICATION

To my parents, my family,
my colleagues and
My friends
With ever lasting
appreciation.

Acknowledgement

Writing a thesis is a very hard job in my situation as an administrator in a newly established Radiology Department; however the support researcher received from many sources was invaluable and made it easy to navigate.

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Abstract

Establishing and maintaining of quality assurance programme is a challenge, and a complex task especially in a newly started Radiology Department.

Quality assurance (QA) is a consistent procedure designed to meet and exceed the customer's needs and expectations. It's a process by which staff members work together to improve the work outcomes. It's a team effort on all levels of the organization, and every one has a role to act and play in quality improvement.

In this thesis quality control tests are mainly done by the Bio-Medical Engineering Department and radiology department – according to the dept. policy- and the main QA indicator in Radiology Department i.e. reject film analysis are used for 15 months to establish Q. C. In Alrahba hospital Radiology Department which is a newly established Department in UAE (Aug. 2003).

Monitoring and analyzing the results of the data collected illustrated a considerable improvement in the quality of the final results of the Radiology Department work.

المخلص ABSTRACT

في عهدنا الحالي ونتيجة للتطور والتقدم المطرد في جميع مناحي الحياة العملية المختلفة ونتيجة للطفرة الصناعية الهائلة أصبح برنامج ضبط الجودة من الأساسيات والضروريات في أي مؤسسة و مصلحة حكومية أو غيرحكومية. لذلك أنشأت وحدات لضبط الجودة وظيفتها مراقبة وتصحيح وتقييم ومتابعة العمل وذلك لتقليل تكلفة المنتج والمقدرة علي المنافسة وتقديم أفضل الخدمات التي ترضي طموح العملاء . و قد بدأ تطبيق برامج ضبط الجودة في المؤسسات الصحية منذ فترة بعيدة سيما في أقسام الأشعة. و تعتبر عملية الانشاء والمحافظة على برنامج ضبط الجودة في قسم الاشعة تحديا صعبا ومهمة معقدة وتتطلب الكثير من الجهد والمتابعة المستمرة خاصة في قسم حديث التكوين . فتأكيد الجودة وضبطها هي عملية متناسقة ومنسجمة يناط بها مقابلة الاحتياجات الضرورية والتوقعات المتزايدة للعميل أيا كان نوعه , وهي خلاصة تعاون مشترك وجهد جماعي بين الإدارة والموظفين وعلى جميع مستوياتهم لتطوير الأداء في المؤسسة المنظمة لهذا البرنامج ومن خلال ذلك يكون لكل فرد دورا يلعبه ويشارك به في ترقية وتطوير هذا البرنامج .

في هذه الرسالة تم استعمال مراقبة الجودة لأجهزة الأشعة السينية. اضافة لأستعمال مؤشر ضبط الجودة الرئيسي في قسم الأشعة وهو (تحليل الأفلام المرفوضة) لمدة خمسة عشر شهراً بقسم الأشعة بمستشفى الرحبة – بإمارة أبوظبي- والذي يعتبر من الأقسام حديثة التكوين.(أغسطس- 2003).

مراقبة وتحليل النتائج لهذه المعلومات أثبتت بما لايدع مجال للشك أن هنالك تطور ملموس وتحسن ملحوظ في الأداء مما كان عليه سابقا ويتضح ذلك جليا في نوعية العمل وجودة الأفلام المستخرجة.

ABBREVIATIONS

- QA: Quality Assurance
- UAE: United Arab Emirates
- GAHS: General Authority for Health Services
- QC: Quality Control
- TQC: Total Quality Control
- US: United State
- PDCA: Plan, Do, Check Act.
- QI: Quality Improvement
- TQM: Total Quality Management
- NA 07-600: Catalogue number of beam alignment test tool
- Leeds test object-MI: Imaging geometry & sizing
- Leeds test object-GS2: Adjustment of display monitor
- Huttner test tool: Used to measure high contrast resolution of fluoroscopic system

- Leeds test object – N3: Test tool for checking noise & contrast loss
- Victoreen 4000 M+: Digital device used to measure kvp output, exposure time.
- AAPM: American Association of Physicists in Medicine.
- CTDI: Computed Tomography Dose Index (equivalent of output in X-ray).
- WHO: World Health Organization
- JCAHO: Joint Commission on the Accreditation of Healthcare Organization
- JCIA: Joint Commission International Accreditation
- NHS: National Health Service
- BMED: Bio-Medical Engineering Department
- ISO: International Standardization for Organization
- KVP: Kilo-Volt Peak
- mA: milliAmpere
- PPM: Periodic Preventive Maintenance

-MAX.: Maximum

-AEC: Automatic Exposure Control

-NLT: Not Less Than

-GP: General Practitioner

-U/S: Ultra Sound

-IVP: Intravenous Pyelography

-IV: Intra venous

-MSDS: Material Safety Data Sheet

-TSD: Technical Services Division

-OVR: Occurrence Various Reports

-ER: Emergency Room.

-RTA: Road Traffic Accident.

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