



MALAYSIAN SOCIETY OF RADIOGRAPHERS

Affiliated to The International Society of Radiographers and Radiological Technologists (I.S.R.R.T.)

Message from the president

Greetings and well wishes to all radiographers

I would like to take this opportunity to thank the editorial committee for working on the 3rd issues of Sinaran since MSR has revived it last year. We are still behind the schedule time. Anyway, I will not put the blame to the committee as it is impossible for us to get the Sinaran out if we do not receive articles from the members. All radiographers are encouraged to submit articles. Sinaran can be a platform to discuss, share experience and make practical suggestions as to how we can highlight the importance, effectiveness and value of our profession either in clinical services, education and training, research or management. Hence, I sincerely request to our radiographers to submit articles, it can be your own experience, other people's experience, some new things you want to share, something you want to comment. We welcome your contribution. We also accept article in the national language. Our next issue (July – December) will be due end of the year.

We have our Annual General Meeting in April and I would like to thank the members for putting the trust in me to still elect me as the president. I hope I will be



able to serve accordingly. The 43rd AGM see new faces in the committee line up. I hope in this two years term, we are able to put MSR in a better perspective. There are lots to be done, with limited resources and also time constrains, I sincerely apologize to all members if we may look slow and not performing to standard.

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Quote to share

Aries Rooster

"My grandfather once told me that there were two kinds of people: those who do the work and those who take the credit. He told me to try to be in the first group; there was much less competition."

Indira Gandhi

This is words of wisdom. Let it reminds us to not take others' credit when we are not doing the job and give people who work hard the due credit.

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This year, till now there are a few events that we have organized and participated. In January, 16 radiographers (Public and Private) have attended the 19th AACRT in Chiang Mai, Thailand. MSR was able to sponsor their registration fees using our education fund through support from the companies. We hope we are able to do this sort of activities at least once a year in the future.

As reported by our new secretary, we have our AGM in April and I just would like to request that all committee members be responsible and do the work as you are elected for. Every appointment comes with respective responsibilities. We do not want committees who accept the election mandate but failed to deliver as hope for. I am sure members will not tolerate nonfunctioning committee members. I do hope in the future, members should be wise in electing the committee to prevent having shadow committee.

We have the join Annual Scientific Meeting with the College of Radiology this year in June and the response from the Radiographers is rather luke warm due to short of sponsorship. We are considering should we continue this collaboration or should we stop. Please mail to us your opinion and also suggestion.

The Singapore Malaysia Radiographers' Conference will be held from the 13 – 15 September in Singapore. There will be about 14 radiographers and 6 students attending this event. MSR has agreed to sponsor the registration fees for the students to present their papers. This year we are going to have a meeting to discuss should we convert the annual conference to an ASEAN radiographers' conference so that we can include most ASEAN countries to join us and the conference venue can be rotated from country to country and not just between Malaysia and Singapore. This will give a better opportunity for our radiographers to visit and learn from the radiographers from the other part of ASEAN.

Before the year conclude, MSR is going to have another very important seminar which will be held in November from the 8th – 10th. This will be a memorable event as the President and the CEO from the International Society of Radiographers and Radiological Technologist (ISRRT) will be with us to celebrate the World Radiography Day. The ISRRT President Dr. Michael Ward will deliver the keynote lecture for the Geriatric Seminar.

The World Radiography Day that is 8th November marks the anniversary of the discovery of X-ray in 1895. The International Society of Radiographers and Radiological Technologists (ISRRT) would like to encourage radiographers all over the world to celebrate this great discovery. World Radiography Day is an annual international initiative intended to raise awareness of, and to stimulate an interest in, the profession of Radiography. In addition it is aimed at highlighting the importance of Radiography and the indispensable function it plays in the health care environment. The purpose of this day is to raise awareness of radiography and radiation therapy, which play a crucial role in the diagnosis and treatment of patient and, most importantly, ensuring radiation is kept to the minimum required, hence improving quality of patient care.

We have celebrated the founding of X-ray through more than a century. We have come this far to working with this special ray together with the benefit it gave us and also its hazard. The main things is, are we able to uphold the profession as required or just carry out a job, a task and earns a living? Let us examine ourselves on this coming World Radiography Day. What is radiography mean to us? Is our practice reflecting the profession and where should we be heading towards in the future.

I sincerely hope our members will come and participate in this November event. Learn something on Geriatric Imaging, Radiotherapy and Oncology. Meet up with our international guests and also join us to celebrate the 1st nationally held World Radiography Day gala Dinner.

Best Wishes



President

THE COST OF DOWNTIME AND RISK MANAGEMENT

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As healthcare facilities approach a totally digital environment and to have hard-copy paper and film records disappear in this digital adoption, the requirement for 100% system uptime will become a necessity. Three main reasons to achieve near 100% uptime is to provide healthcare to patients 24 hours a day – every day, protect patient and financial information and to minimize the costs associated with downtime. Since the cost to provide 100% uptime of an all digital healthcare environment may be cost prohibitive, alternative methods must be considered. These methods should be considered:

- elimination of single-points-of-failure,
- enterprise storage management system(*1, *2),
- a well-documented and practiced disaster recovery plan and work-arounds to be implemented when the system fails, and
- consideration of out-sourcing solutions can be one way to minimize downtime caused by either catastrophic event or hardware/software failure.

In making any decision, it is important to consider how much risk you can tolerate versus how much you are

willing to spend to mitigate that risk. From a fiscal perspective, if the cost to mitigate the risk is considered as an insurance policy, that cost is easily justifiable, since healthcare facilities, as does any business entity, protect their fiscal assets by purchasing insurance.

Causes of Downtime

Direct causes of downtime are created from catastrophic events creating long-term downtime and human and material cost. As an example, The Oppenheimer Fund located in the World Trade Center was up and operational within hours of 9/11 because of a disaster recovery and business continuity plan was in place (*3). This service was accepted as a standard cost of business and routinely tested with out-sourced service providers. However, this approach to “risk management” is not used by a majority of healthcare facilities.

Weather conditions, fire and other large scale or localized disasters occur infrequently, but internal system failures and operational disruptions occur all too often in the healthcare environment. These incremental disasters account for more than 95% or more of the failures that cause system downtime and data loss.

Downtime due to technology obsolescence is a rhythm in healthcare. Most components, both hardware and software applications, in the digital environment have a three- to six-year lifecycle. When hardware storage systems or the associated storage media and applications are replaced or upgraded, information must be migrated from one media source to another or be modified to operate efficiently with a new or upgraded application. These migrations or database modifications can be both costly and

consume a significant amount of time.

Many of these system outages can be eliminated or reduced to an acceptable level by creating internal system redundancy or out-sourced services for redundancy. These uptime alternatives come at a price which must be balanced against tangible business costs such as revenue loss and intangible costs created from the inability to provide patient care due to unavailability of critical clinical patient data and corruption of financial information.

Cost of Downtime

It has been documented in case studies that a digital healthcare environment improves productivity, reduces errors and is cost effective with a tangible return on investment. When a healthcare facility has achieved a near paperless and filmless environment, the digital infrastructure becomes the sole means of obtaining critical clinical patient and financial information.

But, what are the tangible and intangible costs when this instantaneous lifeline of information is not available? The categories of tangible costs for downtime that must be considered include any vendor costs and/or reimbursements for unscheduled downtime, the cost of policy development for BC and the associated maintenance and training of this BC plan to the organization. Beyond personnel costs associated with recovery, there are costs associated with any data buffering/storage prior to the primary system being brought back online.

The degree and types of tangible and intangible costs associated with downtime is dependent on the type of healthcare facility and patient population. However, more often than not, clinical resources such as technologists and departmental staff are required to assist those with IT responsibility when rebuilding the data upon system restoration and this has material cost to the operation.

The economic significance of downtime is highly dependent on its duration and the healthcare facility and patient demographics. The cost can range from a few thousand dollars for a five to fifteen minute interruption of service to tens of thousands of dollars when the impact affects patient care. If the outage exceeds one or more hours the cost can range in the hundreds of thousands of dollars. These cost estimates are only for the tangible cost and do not consider the intangible impact on the healthcare facility or potential litigation for a delay of a procedure or unrecoverable patient records – the potential cost is not calculable. Specific examples of this exist, e.g. two disks failed in a RAID 5 storage system, backup data was not available and multiple terabytes of angiographic studies were unrecoverable due to an ineffective disaster recovery program.

The less objective costs of downtime are difficult to calculate and are potentially larger than the internal costs due to the impact on the business. The disruptive nature of not providing medical services when required, because of unavailability of critical medical information can have lasting effects on patients and referrals which can be costly to re-build/restore. These relationship costs are soft costs, while the loss of cash flow is real and can require significant investment in patient recruitment costs.

Disaster Recovery Is Necessary, But Business Continuation Is Required

A DR (Disaster Recovery) program is mandated by HIPAA and if properly implemented will provide the functionality to recover data from a catastrophic event or system failure taking a finite period of time. The DR program requires the retrievability of exact copies of electronic Protected Health Information (ePHI). The period during which ePHI is unavailable would be considered downtime. One aspect of a business continuation plan is to provide the ePHI during this recovery period.

Some of the basic requirements for a BC (Business Continuity), plan to maintain the availability of ePHI, both data and images for internal non-catastrophic events which account for more than 95% of downtime include:

- Elimination of single points of failure in the infrastructure including switches, routers, application gateways and interfaces, power, internet connectivity.
- If economically feasible and information technology support is available, servers should be clustered or virtualized and direct attached storage eliminated in favor of more robust storage solutions.

A further requirement to ensure availability of ePHI that will minimize cost and facilitate adhering to the HIPAA security requirement is maintaining an enterprise storage solution and eliminating isolated silos of department storage (*1). The storage solution for images and other fixed content files such as structured reports and wave forms must be vendor neutral and DICOM compliant (*1, *2). Adhering to standards will minimize both cost and time to migrate stored information resulting from technology obsolescence and facilitate rapid retrieval of outsourced information from off-site healthcare or vendor operated secure data centers.

Databases should be periodically and automatically replicated during the day and completely backed-up incrementally daily and completely on a weekly basis to a remote off-site location. This approach will allow a database to be rapidly restored should a failure occur from the remote location. It is absolutely essential to periodically test the restoration of a backed-up database to a test server.

Summary

The mandatory procedures and additional precautions discussed as part of DR and BC will add to the cost of operating the digital environment of a healthcare facility. These expenditures will facilitate a rapid recovery after an unlikely catastrophic event and will minimize or eliminate the cost of downtime because of human error, system failure or technology obsolescence. Calculate the cost DR and BC to maintain the availability of ePHI against tangible and intangible costs of downtime. How can a healthcare institution not justify paying for downtime insurance when it is a form of risk management insurance similar to other policies carried by the healthcare institution?

* References

Smith, EM. Integrated implementation revamps information storage, *Diagnostic Imaging*, Jan. 2005, pp 39-43.

Langer, S. Issues surrounding PACS archiving to external third-party DICOM archives, *J. of Digital Imaging*.

www.csoonline.com/article/218947/Business_Continuity_Planning_The_Optimistic_Pessimist?

Smith, EM. Fee-Per-Study Storage: - the outsourcing option, *ADVANCE for imaging and oncology administrators*, Nov. 2006, pp 45-50.

Smith, EM. Advantages of outsourced storage surpass expenses, *Diagnostic Imaging*, July 2008, pp S-1 – S-5.

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REPORT ON MALAYSIAN SOCIETY OF RADIOGRAPHERS SCIENTIFIC MEETING AND 43RD AGM

On the 26 to 28th April 2013, Malaysian Society of Radiographers (MSR) organized a Scientific Meeting and 43rd Annual General Meeting (AGM) at Berjaya Times Square Hotel. Almost 200 participants joined this event. The theme for this event is Digital Imaging: Today's Imaging Solution. This theme is in-line with the current practice of digital imaging in many hospitals and medical centre in Malaysia. Since Ministry of Health (MOH) also has future plan for digital imaging in all MOH hospitals, therefore the theme seemed to be timely for knowledge advancement for all radiographers who are currently utilizing digital imaging or planning to utilize it in the near future. MSR is also privileged to welcome Dr Napapong Pongnapang to assist in conducting the seminar. He is well versed with digital imaging and has vast experiences in this field.

The registration for this scientific meeting started on Friday afternoon followed by first lecture by Dr Napapong on how to set up a digital imaging department. After tea-break, the lecture by Dr Napapong concentrated more deeper on digital imaging. Topics such as 'Digital Imaging Characteristics', 'Image Artefacts and Management' and 'Exposure Index and Its Application' were introduced and covered. A Dinner Symposium by one of the medical imaging company ended the first day session.

On the next day, the lectures started as early as 8.30 in the morning. The lectures were continued on specifically selected topic on digital imaging such as 'Basics of Image Processing' and 'Viewing Monitor Characteristics'. After tea-break, two final lectures from Dr Napapong for 'Quality Control of Digital Imaging' and 'How to Work Effectively With Digital Imaging' concluded his digital imaging coverage. Lunch Symposium by another medical imaging company ended the morning session.

After having a great lunch, the 43rd AGM started. There were 137 registered members attended the AGM. Few things were discussed on matters arising including mission and vision of MSR, initiation of Education Fund and Building Fund, membership annual fee, 27th Malaysia Singapore Radiographers Conference (MSRC) and 28th Singapore Malaysia

Radiographers Conference (SMRC) which will be held in September 2013. The AGM continued with reports from the secretary and the treasurer for the year of 2012. Then there was election of new Council Members and the AGM finished at around 7.15 in the evening. Shortly, the Gala Dinner appeared and few members of the floor won several prizes from the pop-quiz during the inter-session.

The last day of the academic session was filled with topics by the MOH speakers regarding the radiation protection and also legislation and regulation (Act 304). Few more lectures concentrating on updates in techniques and image analysis for chest and extremities radiography, chest x-ray reporting, and PACS filled up the morning session.

Through-out the three days, the seminar has delivered quite fruitful lecture from various speakers. Hopefully it will be beneficial to all participants who have attended the seminar.

Reported by,



Mazli Mohamad Zin
Honorary Secretary, MSR (2013-2015)

A LITTLE THOUGHT ON STEREOTYPES

By Andy Goh.

Diversity is generally accepted fact. That's what makes all of us unique in one way of another. Therefore the understanding of these differences is crucially important as it may helps to maintain the stability in society.

However, unintentionally we start to classify people into different groups according to our viewpoints. And this is when stereotyping happen. These viewpoints are unavoidably influenced by 'external factors' such as upbringing, society norms, cultural background, etc.

These viewpoints could easily and dangerously get 'tainted' to a certain degree by other factors such as race and religion. Even though we understand the negative effects of stereotyping, but sometimes you may find it unavoidable.

Negative stereotypes could affect professionals' relationships among colleagues. And as in education profession it could and it often creates performance decrements and may also impact major life decisions on the students.

Stereotype the Colleagues

Generally there are three types of colleagues: know-it all, know-it best and couldn't care less.

Know-it all

The first group, it could be the person who knows it all, or rather appears to know it all. He/She might not know quite everything, but he/she'll make it a point to let you know that he/she certainly knows more than you.

Mention a certain news article you read recently about new low cost airline in Malaysia and he/she'll tell you about the space exploration by NASA (National Aeronautics and Space Administration) findings on the subject.

Know- it best

Talk about the impending changes in the curriculum, and she knows all about it already.

Therefore you should have followed his/her advise in doing

everything, from developing teaching content, setting examination questions or filling up the Malaysian Qualifications Agency's (MQA) forms.

Somehow, you feel that she knows more about you than you yourself do.

Couldn't care less

Along the way, you may come across the laid-back and care-free colleagues whom you have never known to get worked up over deadlines or duties no matter how ridiculous they maybe.

He/She is the nightmare of the human resource manager and discipline committee but it could turns out to be a good friend and listener as he/she makes you feel that the world is not all "doom and gloom" as long as you learned to sit back and relax.

Stereotype the Students

It is likely that stereotypes are often unintentionally reinforced by educators themselves. For instance, educators may inadvertently call upon boys more than girls when answering cardiac angiogram or physic science-related questions. Maybe an educator may tries to challenge students from urban secondary school with difficult questions as we perceived these students came from well equipped school compare to those from rural schools.

There probably is no end to stereotypes when you come to think about it, and all of us are probably in the overlapping zones of several types ourselves. We may not be able to choose with whom we need to interact, but we can be thoughtful with the words we used to speak and the way we treat another human being.

ANNOUNCEMENT



MALAYSIAN SOCIETY OF RADIOGRAPHERS

*Geriatric Medical Imaging:
Current & Future
Practice Considerations*

“In conjunction with the World Radiography Day”



*Special keynote by:
Dr. Michael Ward
ISRRT President.*

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