

Contingency Planning: Can You Handle a Ransomware Attack?

Session Introduction

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Abstract – key words – in red

With the increase of **ransomware attacks** on health systems, parts of the **treatment infrastructure may become unavailable**. It is important to have a **business continuity plan to treat the patients safely and effectively**. This plan should include **iterative backups of data**, means of **contacting patients** and how to **get the treatment data to the treatment machine**.

In this session, we will **review the major cybersecurity threats** and their **impact on clinical operations**. While **different threats** have different effects on our ability to treat, they all **must be assessed as part of a business continuity plan** to reduce clinical downtime. We will discuss the general concepts involved in **designing a business continuity plan**. Building on these concepts, **examples of such plans** will be given for **two scenarios**: (1) An **all-Varian environment** with Aria, Eclipse, Truebeam and C-Series linacs, and (2) A **mixed environment** where the linacs and radiation oncology information systems come from different vendors.

Learning Objectives

1. Understand the nature of various cybersecurity threats, with a focus on ransomware
2. Learn general principles of Business Continuity
3. Understand why it is important to have iterative backups, and verify their use ahead of time
4. How to handle different situations which can interrupt the workflow in getting patients treated safely and effectively.

Topics and Speakers

- Primer on Cybersecurity Threats
 - Tianjun Ma
- Principles of Business Continuity
 - Ramon Alfredo Siochi
- Business Continuity in a Mixed Environment
 - Jeremy Donaghue
- Business Continuity in an All-Varian Environment
 - Ramon Alfredo Siochi
- Q&A – all speakers

Primer on Cybersecurity Threats

- Tianjun Ma, Virginia Commonwealth University
- Description of Attackers and Defenders
- Different types of attacks
- What can we do about them?

Principles of Business Continuity

- Ramon Alfredo C. Siochi, West Virginia University
- Describe general principles, applicable to all types of businesses
- Applications specific to Radiation Therapy
- Business Continuity is Continuity of Patient Care

Business Continuity in a Mixed Environment

- Jeremy Donaghue, Cleveland Clinic Foundation
- Ransomware attacks and cancer care
- What do you do when you have multiple radiotherapy vendors?
 - Linac vendor different from OIS vendor?
 - How to get treatment data to the treatment machine

Business Continuity in an All-Varian Environment

- Ramon Alfredo C. Siochi, West Virginia University
- Prevent, Prepare, Respond to ransomware event
- The OIS and Linacs are from Varian
 - (Aria, Eclipse, C-Series, Truebeam)

Q&A

Please stay for the panel session
after the presentations and ask
the speakers questions!