

# Network Services Whitepaper

## Introduction

This whitepaper defines the vulnerabilities faced by medical office systems that are connected to the internet. Various types of routine maintenance procedures for a computer system that allows it to run at its maximum efficiency are also discussed. All of the recommended services can be provided by GBA through its Network Services contract program. Call GBA Sales at **(800) 421-9497** for more details.

## System Attackers

### Spyware/Adware

Spyware/adware covers a broad category of malicious software designed to intercept or take partial control of a computer's operation without the consent of the owner/user. Spyware subverts the computer's operation for the benefit of a third party. Adware is a type of spyware that tracks, reports and often resells information about the system user's activities. It is a software package that automatically plays, displays, or downloads advertising material to a computer (again, without the user's permission) after the software is installed or while the application is running. Pop-ups are a well known example of adware.

**How you get it?** – Downloading some wallpapers, screensavers, mouse icons, and/or other novelty offerings from the internet, clicking on bad links on any website, or downloading some types of software.

**How do you know that you have it ?** – Your computer is not acting normally. Some symptoms could be:

- Your system is running slower than usual
- New icons appear on your desktop or in your system tray
- Connecting to the internet or other computers is problematic
- Shutting your system down takes longer
- Pop-ups appear on your screen more frequently
- Your system freezes and will not operate

**What is the impact to my practice?** – Some spyware/adware is used only to track your interests online and is not particularly harmful to your operating system. However, other forms of spyware/adware are used to inform third parties

of weaknesses in your network leading them to the holes they need to hack in and do damage.

## **Virus**

Just like a human virus replicates itself, a computer virus propagates itself by infecting other executable programs. While viruses can be intentionally destructive by destroying data, other viruses are fairly benign and merely annoying.

**How you get it?** – Opening email attachments, downloading from unsecured sources, and using a compromised system can allow hackers to install the virus through open ports.

**How do you know that you have it?** – Even a simple virus has the capability to tie up memory and bring your system to a halt. It can interfere with your computer's operating system and can be passed to other computers either accidentally or intentionally through email, downloads, network messages, or infected media.

**What is the impact to my practice?** – A virus infestation results in downtime, lost revenue, and additional expenses to hire a technician to restore your system to its pre-attack level.

## **Advice and Assistance Available from GBA**

Listed below are some of the services that GBA Network Technicians can perform to help keep your network running optimally.

### **Spyware/Adware and Viruses**

During a visit to your office, a GBA trained Network Technician inspects your system to make sure that the tools are in place to combat spyware/adware and viruses. Scans are run to identify system attackers and they are removed. If sufficient protection is not in place, the Technician makes recommendations about what is needed to safeguard your system.

### **Operating System and Software Updates**

Periodically the manufacturer of your computer's operating system (Microsoft Windows, in most cases) provides security updates and patches for holes found in their coding. It is crucial to the security of your network that these security updates are installed when you are notified about them. GBA's Technicians can check periodically to make sure all updates have been executed for your software and operating systems.

### **Testing Backup and Restore Functionality**

How confident are you that all of your data is being successfully backed up and that, in the event of a disaster, it will restore properly? GBA's Technicians can

proactively perform a mock disaster recovery by restoring your data and ensuring that you have a full, complete backup to help get your office back up and running with a minimum of downtime.

### **De-Fragmenting Hard Drives**

Ever wonder why your computer slows down over time? Hard disk fragmentation can be one of the causes. When your computer stores files, it stores them in fragments on your hard drive. Over time this can cause your computer to work much harder to find and open its files. A hard drive analysis and de-fragmentation can considerably speed up your computer.

### **Bandwidth Testing**

Are you getting the internet speed that you are paying for from your internet service provider? Are there problems with devices causing your internet speed to be slow? GBA Technicians can analyze your bandwidth and tell you exactly what your upload and download speeds are. In the event of a problem, we can work with your internet service provider to ensure that you are receiving your full level of service.

### **Test UPS Battery Backup**

Over time the battery in your Uninterruptible Power Supply (UPS) device can lose its capacity to hold a charge. In the event of a power outage, blackout, or surge, your UPS device is meant to kick in to protect your server. GBA Technicians can test your battery backup in a controlled environment to ensure that it functions properly when you need it most.