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Promising Apps, Preventing Mishaps, and More: Technology in Pediatric Therapy

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Objectives

- **Learning objectives. Upon completion of this course, you will be able to:**
- The participant will be able to define at least three guidelines for the application of FERPA (Family Education Rights and Privacy Act) and HIPAA (Health Insurance Portability and Accountability Act) for school staff, including occupational and physical therapist in the school setting.
- The participant will be able to correctly describe at least three appropriate data management practices for student data (including the information collected for, and kept in, student records).

Objectives

- **Learning objectives. Upon completion of this course, you will be able to:**
- The participant will be able to describe at least two components of assessing and implementing electronic health records.
- The participant will be able to identify at least three benefits of incorporating technology (i.e. computers, hand held devices, video games, etc.) into occupational and physical therapy for children.
- The participant will be able to outline at least four strategies for implementing technology (i.e. computers, hand held devices, video games, etc.) into clinical practice for children in the school environment.

What if....

- A PT places a large box of student files in her car. As she is driving around between buildings, she is in a car accident and the papers scatter on the street and blow away.
- An OT puts a memory stick that contains student files/information in his minivan. He stops by another school to catch the end of an IEP meeting. While he is in the meeting his van is broken into. The memory stick is stolen.

Records (WCPT)

- Records provide valuable information that can be used to:
- show evidence of informed consent
- facilitate clinical decision making
- demonstrate duty of care
- improve services including safety and quality of care through clear communication of intervention/treatment rationale
- facilitate a consistent approach to team work, particularly in the context of multidisciplinary records

Records (WCPT)

- Records provide valuable information that can be used to:
- ensure continuity of service provision and management between different service providers
- support other activities such as teaching, research, audit, quality assurance programs and outcomes monitoring
- demonstrate that physical therapists have selected and provided the highest quality services appropriate for their patients/clients
- provide evidence in the event of litigation
- provide a vital source of statistical and managerial information for the day to day running and future planning of physical therapy and health service provision

Guidelines for Records (WCPT)

- Provide support to employees regarding record keeping, storage, retrieval and disposal and in particular the application of national/provincial/state legislation and standards
- Professional accountability for the services provided by a therapist

Guidelines for Records (WCPT)

- Ensure that employees implement procedures for the safe storage, retrieval and disposal of all records
- Ensure that employees record, store, transmit and dispose of patient/client data taking into consideration the requirements for confidentiality

Guidelines for Records (WCPT)

- Make employees aware that individuals have the right to receive information about themselves recorded in any of their records and that this information should be given in an easily understandable format that is accessible to the individual and sensitive to their needs

Guidelines for Records (WCPT)

- Advise guidelines for records management
- Ensure that the electronic systems for record keeping and communication are functional and secure

Guidelines for Records

Clark et al 2013. (OT)

- Practitioner's signature with a minimum of first name or initial, last name, and professional designation
- Acceptable terminology defined within the boundaries of setting
- Abbreviations usage as acceptable within the boundaries of setting
- Documentation should reflect: Necessity of therapy

HIPAA

Alphabet Soup: HIPAA

- HIPAA: *Health Insurance Portability and Accountability Act (HIPAA)*
 - Privacy Rule
- Congress enacted *HIPAA* in 1996
 - Purpose:
 - Improve the efficiency and effectiveness of the health care system
 - Est. of national standards and requirements for electronic health care transactions
 - Protect the privacy and security of individually identifiable health information

Alphabet Soup: HIPAA

- Requires: **covered entities** to protect individuals' health records and other identifiable health information by requiring appropriate safeguards to protect privacy, and setting limits and conditions on the uses and disclosures that may be made of such information without patient authorization
- Gives patients rights over their health information, including rights to examine and obtain a copy of their health records, and to request corrections

Covered entity?

- A health plan, healthcare clearinghouse, or any healthcare provider who transmits health information in electronic form in connection with transactions for which the Secretary of HHS has adopted standards under HIPAA.

Alphabet Soup: FERPA

- FERPA: *Family Educational Rights and Privacy Act (FERPA)*
 - Federal law that protects the privacy of students' "education records."
 - Means records, files, documents, and other materials that contain information directly related to a student

Alphabet Soup: FERPA

- Applies to educational agencies and institutions that receive funds under any program administered by the U.S. Department of Education

FERPA

- Rights under FERPA transfer to the student (“eligible student”) when he or she reaches 18 or attends a postsecondary education institution at any age
- Security: have technical procedures that ensure only authorized and intended parties have access to data

Health Information Technology for Economic and Clinical Health Act (HITECH) –Part D Privacy

- Requires HIPAA covered entities to report data breaches affecting 500 or more individuals to HHS and the media, in addition to notifying the affected individuals
- Extends the Provisions of HIPAA to business associates of covered entities

Comparison of FERPA and HIPAA Privacy Rule for Accessing Student Health Data

- **Privacy Rights Conferred**
 - FERPA: **personally identifiable information (PII)**
 - HIPAA: **protected health information (PHI)**
- **Persons or Entities Covered**
- **Information Covered**
 - FERPA:
 - “Personally identifiable information” (PII)
 - “Education record”
 - HIPAA:
 - “Protected health information” (PHI)

Comparison of FERPA and HIPAA Privacy Rule for Accessing Student Health Data

- **Accessing Data With Consent**
- **De-Identified and Limited Data**
- **Emergencies and Threats to Health or Safety**
- **Data Not Maintained by School**

WANT MORE?

- **US Dept of Ed**
 - Privacy Technical Assistance Center (PTAC)
 - Offers guidance to schools regarding the various laws regarding student privacy and confidentiality
 - <http://ptac.ed.gov>

Data management

Guidelines: 3 **Keys to Success in Data Management**

- **Informed Consent** –records including electronic transmission and storage
- **Appropriate consultation** –with others
- Good **record keeping** practices and strategies

Data management

- Storage
 - Paper
 - Electronic
- Cloud
- CD/DVD/external hard drive
- Lost data/computer/USB data stick

What is a digital record?

- Written notes
- Scanned files, records, reports
- Email
- Text messages
- Video and Audio files

Data Management

- **Copiers**—may store your copies
- **E-mails** are open and available to everyone
- **Master files/reports** —access issues
- **“Other files”** —not protected/computer access; file names may be viewed

Data Management

Data Management

- Relationship with a client:
 - establish rapport
 - keep it professional
- Magnifying glass life: Learning about clients online/they learn about you online
- Self reflection: What are your personal practice guidelines about data management/disclosure?
- Studies indicate: Need more and Up hill battle: More training about technology is needed; keeping up-to-date with data management will be a challenge
- Have Policies! Examples: e-mail reply all, technology failure; accidental disclosure; storage of information (cloud)
 - Check email address before responding; reply all

Caution!!!!!!

- **Facebook – ethical caution**
- **Copiers –the hard drive save copies**
- **Faxes without a cover sheet**
- **Lost files or lost USB without password protection or encryption**
- **Smartphone without password protection**
- **Computer protection: firewalls, anti-virus software, stay current with anti virus updates**

Caution!!!!!!

- **Software: updates- stay current**
- **“Reply all” email**
- **Electronic files storage; cloud options**
- **Are electronic files backed-up?**
- **DO NOT email reports or files to yourself**
- **File names CAN be viewed by others when Archived or on a cloud**
- **Are your files really deleted?**

Chore 101: Learn How to Take Out the Trash

- **Recycle Bin / Trash files can be recovered**
 - Permanently delete

Don't Panic

- Track the location of lost devices:
 - APPS
 - SHARE
 - Norton
 - Find iphone
 - Look out

Email? Yikes!!! Think Twice

- **Email is the least protected for student confidentiality**
- HIPAA Best Practices:
 - Use work email
 - Limit email recipients
 - Notify parents prior to using email/ contact preferences
 - Recommend parent provide personal over work email
 - Verify recipient email address prior to sending

Email? Yikes!!! Think Twice

- **Email is the least protected for student confidentiality**
- **HIPAA Best Practices:**
 - Include DIRECTIONS FOR: “Unintended Recipient”
 - Place confidential information in attachments ONLY
 - Utilize password protection on documents
 - Tag/title “Confidential”
 - Utilize “Expiration” feature (5 days)
 - De-identify info (I.e. meeting question vs. Amy S.’s IEP question)
 - Utilize the Cloud

Email protection- examples

- ***Confidentiality Warning:*** *This e-mail contains information intended only for the use of the individual or entity named above. If the reader of this e-mail is not the intended recipient or the employee or agent responsible for delivering it to the intended recipient, any dissemination, publication or copying of this e-mail is strictly prohibited. The sender does not accept any responsibility for any loss, disruption or damage to your data or computer system that may occur while using data contained in, or transmitted with, this e-mail. If you have received this e-mail in error, please immediately notify us by return e-mail. Thank you.*

Email protection- examples

- This email and any files transmitted with it are confidential and intended solely for the use of the individual or entity to whom they are addressed. If you have received this email in error please notify the system manager. This message contains confidential information and is intended only for the individual named. If you are not the named addressee you should not disseminate, distribute or copy this e-mail. Please notify the sender immediately by e-mail if you have received this e-mail by mistake and delete this e-mail from your system. If you are not the intended recipient you are notified that disclosing, copying, distributing or taking any action in reliance on the contents of this information is strictly prohibited.

Passwords

Passwords 101

- **Most common password in 2014:**
'123456'

- most common
 - Password
 - Abc123
 - 111111
 - lloveyou
 - 123123
 - 1234567890

12345678
123456789
1234567
adobe123
admin
Letmein

Passwords 101

- **Most common passwords in 2015:**
- **Most popular : 123456**
 - Others (descending order)
 - password
 - 12345
 - 1234
 - football
 - qwerty
 - 1234567890
 - 1234567
 - princess
 - solo
- login
- welcome
- loveme
- hottie
- abc123
- 121212
- 123456789
- flower
- passwOrd
- dragon

Passwords 101

- Don't reuse / Don't use existing passwords
- Don't use a regular word
- At least 8 characters: Letters (Mix cases), numbers, and special characters
 - (punctuation, asterisk, etc)
- Change passwords regularly
- Don't be obvious!!!!
 - Examples – school mascot, street address, guest
- Don't share password /write down
 - No “little black book?”

The New “Little Black Book”

- **Password Sites/Storage**
- KeePass(Free) –
www.keepass.info
- LastPass(Free) –
www.lastpass.com
- PasswordSafe(Free)
- Encrypted **Excel or word** file
- Norton- password safe

Cloud - Advantages

- Allows access to and manipulation of files
- Constant back-up and storage of files
- Information accessed from anywhere
- Reduces risks of files being lost or stolen
- Allows for collaboration
- Resource and time conscious

Questions/ Advantages

- Use on multiple devices?
- Sharing/Examples?
 - With colleagues
 - With external users
- Tech assistance?
 - W H questions

EMRs Shape Up PT Diana 2014

- 2014 report - 85% of those physical therapists planning to buy new EHR software favored cloud versus on-premises applications, (according to a 2014 [Software Advice BuyerView Report](#))
- Physical Therapy Pal (PT Pal), a HIPAA-compliant mobile app used by physical therapists and patients

Summary- PROTECT Your Records !!!

- **Update all software**
- **Backup files**
- **Encryption**
- Know the laws
- Evaluate school policies/electronic records policy
- Limit your exposure to data loss- consider how and where your data is stored
- Inform your school district about your policies

Benefits of incorporating technology into occupational and physical therapy for children

- Technology -- the great equalizer in a classroom with diverse learners
- Educators can find it difficult to differentiate instruction for 30+ students in one class, all with different needs and abilities

Benefits of incorporating technology into occupational and physical therapy for children

- Children with physical disabilities: computers/technology can give access to learning opportunities previously closed to them
- Children with disabilities: are often drawn to computers/technology

Benefits of incorporating technology into occupational and physical therapy for children

- Voice adaptive software can help students answer questions without needing to write
- Computers are engaging and more advanced than the typical modified lesson allows
- Motivation
- Assess and advance academic skills
- Social development
- Motor limitations: e-readers help students turn book pages without applying dexterity

Dance Dance Revolution

- Increased parent participation = increased child participation in DDR.
- At follow-up, DDR participation of siblings and friends was associated with child participation in DDR.

- Paez et al 2009

Autism and Robots

- Increases engagement and imitation
 - Spontaneous play
 - Facilitate social interaction
 - Elicit novel social behaviors
-
- Billard et al 2007, Giannopulu et al 2010, Kozima et al 2007
 - Scassellati et al 2012

Individuals with Physical Limitations and Robot Toys

- Increases independence to manipulate the real objects in a play situation
 - Socially assistive robotics (SAR), which aims to develop robots that assist people with special needs through social interactions
-
- Prazak et al 2004.

Virtual Reality Games (video games) versus Traditional Exercises

- Enable light to moderate physical activity
- Energy expenditure was significantly lower for games played primarily through upper body movements compared with those that engaged the lower body
- Increases in upper extremity control for each child

Virtual Reality Games (video games) versus Traditional Exercises

- High degree of motivation, interest, pleasure, and opportunity for engagement in play activities not previously engaged in
- Increases compliance (increased fun), thus more repetitions
- Fostered creativity, persistence with the task, pleasure, control
 - Note: virtual games that did not increase participation: were too unpredictable and frustrating for participants

Virtual Reality Games (video games) versus Traditional Exercises

- Parents' perception of VR: Positive, physically and socially
 - Increased motivation and social interaction
 - Less need to assist, increased independence of child
 - Feedback: preserve the motivational and social features of games while optimizing the individualized physical exercise
- Review of 13 studies VR and Children with CP:
 - documented brain reorganization/plasticity, motor capacity, visual-perceptual skills, social participation
- Biddiss et al 2010, Bryanton et al 2006, Reid 2004, Reid 2002, Sandlund et al 2012, Snider 2010

WII FIT (Berg et al 2012, Hammond et al 2014, Wuang et al 2011)

- Berg: improvements in
 - postural stability
 - limits of stability
 - BOT-2: Balance, upper-limb coordination, manual dexterity, and running speed and agility standard scores
- Hammond: improvements in
 - Motor skills
- Wuang: improvements in sensorimotor functions

Lessons Learned for Effective Technology Implementation

- A deliberate implementation team is critical to success.
- Think big, but establish a series of smaller interim goals.
- Technology tools and training needs to be linked to teaching practice.
- Teachers need a variety of opportunities for professional learning
- An outside partner can help schools see the big picture.

• [Research Center - Center for Implementing Technology in Education](http://www.cited.org/index.aspx?page_id=206)
http://www.cited.org/index.aspx?page_id=206

3 Tips on Integrating Technology in the Classroom:

- **1. Plan ahead:** Dev. a comprehensive strategy
- **2. Try something new:**
- **3. Become an educational designer:** As technology evolves, so must the teachers

– <http://www.usnews.com/education/blogs/high-school-notes/2012/01/25/3-tips-on-integrating-technology-in-the-classroom>.

Strategies for Implementing Technology

- **SHOW and TELL:**
- Strategies
- Apps
- Websites

Apps Galore: Let's Explore!!!

- OT apps
- PT apps
- Apps in education
- Special needs apps
- IEP apps
- HEP apps
- Homework helper apps
- Fitness apps for kids
- Fitness apps for teens
- Family fitness apps

Other Resources

- Websites
 - Learning style quiz
 - Generational quiz
 - Go Noodle *
 - You tube videos
 - Adapting Video games: making games more universally accessible
 - Universally Accessible Games
 - Serious Games Initiative
 - International Game Developers Association