



We Survived a Cyberattack...in a Pandemic! Preparation Lessons for Your CDI Program

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Presented By



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Presented By



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Learning Objectives

- At the completion of this educational activity, the learner will be able to:
 - Identify ways to continue communication when traditional methods are not available
 - List six potential alternate work assignments
 - Identify three potential staff frustrations
 - Explain two possible employee rewards to help boost morale

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Greater Baltimore Medical Center Healthcare



- Non-profit healthcare organization founded in 1965
- Comprised of:
 - GBMC
 - 344 beds
 - 500+ physicians
 - 100,000+ hospital-based encounters
 - Health Partners
 - Primary Care & Specialty Practices
 - 150,00+ visits
 - Gilchrist
 - Hospice-inpatient & home
- 1,000+ Affiliated physicians
- 1,200+ Nurses

GBMC

- Mission:
 - The mission of GBMC is to provide medical care and service of the highest quality to each patient and to educate the next generation of clinicians, leading to health, healing and hope for the community.
- “To every patient, every time, we will provide the care that we would want for our own loved ones”

Coding and Clinical Validation Staffing Model

- Manager coding and CDI
- Clinical validation and coding auditor
- Coding and CDI informatics specialist
- CDI educator
- Clinical validation specialists (CVS)-100% remote
 - Inpatient accounts-concurrent & retrospective
 - 11 Full-time
 - 3 PRN
- Coders-100% remote
 - Outpatient encounters (observation, ED, same day surgery, L&D clinic)
 - 4 Full-time
 - 2 PRN

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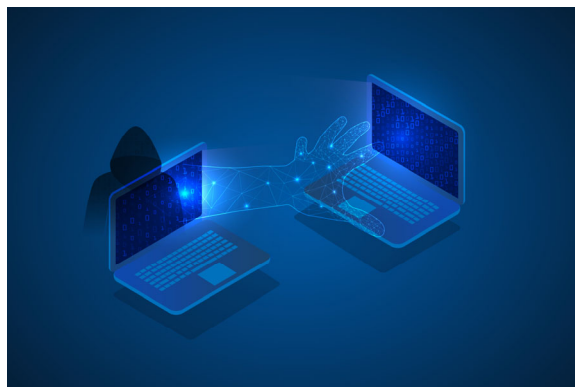
CVS

- Professionals certified in coding & clinical documentation integrity
- Perform concurrent and retrospective review & coding (all payers)
- Clinically validate documented diagnoses
- Assist with:
 - The complete and accurate picture of the patient's health record in the medical record
 - Translation of clinical documentation to appropriate assignment of codes
 - Documentation of comorbid conditions
 - Accurate documentation to support severity of illness (SOI) and risk of mortality (ROM)

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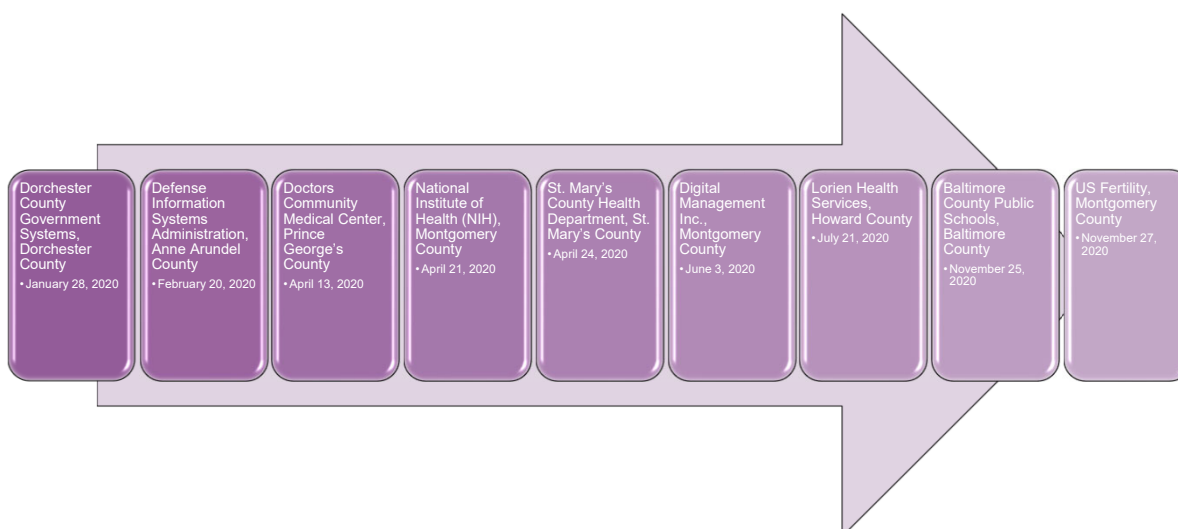
Cyberattack

- An attempt to gain illegal access to a computer or computer system for the purpose of causing damage or harm
 - Merriam-Webster Dictionary



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2020 Reported Cybersecurity Incidences in Maryland



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Our 2020 Until December

- Variable census due to COVID-19
- Staff performing alternate roles to maintain FTE status
- Required to take paid time off
- Implementation of new software
 - 3M CDI Engage One
 - PwC SMART (Systematic Monitoring and Review of Technology)

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Software Implementation

3M CDI Engage One

- Uses advanced artificial intelligence and natural language understanding technology to embed proactive clinical intelligence into front end physician electronic health record and back-end CDI workflows
- Using encounter-based clinical reasoning and automation, it combs through the EHR notes and narrative documents to find missing specificity in documentation and opportunities to improve patient care
- Customizable to your organization's standards

SMART

- Increases the efficiency and effectiveness of inpatient and outpatient coding quality evaluation process, and enables a mechanism for quality and compliance review
- The software:
 - Identifies potential coding inaccuracies and documentation improvement opportunities
 - Improves accuracy of claims
 - Identifies charge capture issues
 - Improves regulator compliance
- Customizable for an organization's needs

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Sunday, December 6, 2020



- Here's what we knew:
 - Cyberattack
 - Ransomware-encrypted random files
 - Entire network went down
- CDI informatics specialist alerted staff via text that the computer system was down
 - Uncertain when the network would return
 - Prepare for changes in staffing schedules

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GBMC's Immediate First Steps

- Opened command center
 - Evaluated access to downtime reports
 - Runners
 - Safety officers
- Determined order of recovery
- Established alternate lines of communication
 - Identified stakeholders from every area
- Reached out to 3rd parties
- Identified resources to begin recovery
 - External and Internal
- Talked to Epic
 - We weren't the first

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Alternate Work Assignments for Coding & CDI

Runner

Census tracking

Safety RN

Telemetry monitoring

Chart prep for scanning

Abstracting for birth certificate completion

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Challenges With Alternate Work Assignments

Reporting
onsite

Staff's
distance to
GBMC

Inclement
weather

Deviation
from normal
schedules

Comfort
levels

Ability
assessment

Pandemic

Managing
staff
schedules

Tracking
time worked

Staff Frustrations

- Time spent commuting
- Uncertainty when normal workflows would resume
- Perceived limited communication
- Backbiting
- Changes to work schedules
- Availability of shifts in the alternate labor pool
- Uncertainty of daily alternate assignments



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Return of Software

- Wednesday, December 23, 2020
 - Access to ambulatory/hospice established
- Sunday, January 3, 2021
 - Access to acute care established

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Our Work Was Just Beginning

- Patient access began to enter registrations (December 6-December 28)
- Reimaging laptops
- Passwords reset
- Duo-Mobile authentication mandated
- Paper documentation still needed to be scanned into the medical records
 - Some scanning was outsourced
- Limited office space for staff to work onsite
- Restoration of remote access
 - January 13th, started testing remote access
 - January 16th, staff returned home

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Workflows Shifted

- Accounts discharged prior to December 6, 2020, were completed (if all documentation was available)
- Patients admitted after January 3, 2021, concurrently reviewed
- Patients admitted prior to December 6, 2020, and still hospitalized were concurrently reviewed
- Patients admitted prior to December 6, 2020, and discharged during downtime
- Patients admitted and discharged during downtime
 - ❖ *If there was the need to query the provider, charts were held*
 - ❖ *Waited for paper documentation to be scanned prior to accounts being coded*

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What Am I Missing?



- We realized quickly there were missing outstanding queries sent prior to December 6th
- Ran report out of Epic to identify the outstanding queries
 - Approximately 50 queries were awaiting provider responses
 - 3M CDI Engage One restoration unknown

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Change in Query Process

Before December 6, 2020

- Queries created and responded to in 3M CDI Engage One

Post January 3, 2021

- CDI Engage One platform was not restored with other systems on January 3rd
- Queries were held for approximately 3 weeks as there was hope that query tool would be restored in this time frame
- Unfortunately, we realized the problem was more complex and we couldn't delay any longer
- Work around-reverted to Epic query process
 - Query generated in Epic
 - Sent to provider via in-basket function
- Created some confusion for providers

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What's Old Is New Again

- As staff were coding and validating, they made notes of queries to be sent
 - To include query type needed (sepsis, POA status, abnormal lab finding, etc.), indicators in the record, which scanned pages this information was found on, etc.
 - This was done to streamline the process
 - When it was determined we would resume sending queries in Epic, it was easy to create the queries based on the notes taken
- Some confusion among providers
 - Were not receiving queries for several weeks and now suddenly receiving them
 - Where were queries to be found? How were physicians being notified?

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SMART Software Interruption

Before December 6, 2020

- Launched 12/3/2020

Post January 3, 2021

- Utilized report from finance with state distribution of DRG and SOI and performed 60 chart audit for potential areas of improvement
- Not a big change-we had only been using SMART 3 days before the cyberattack

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Additional Duties

- Verifying & correcting as necessary:
 - Admission/discharge dates & times
 - Admitting & attending physician
 - Inpatient/observation status (discrepancies review by utilization review)
 - Accommodation codes (med/surg, tele, ICU, etc.)
 - Newborn birth weights

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HIM

- Deficiency tracking
 - Allowed deficiencies to generate automatically based on triggered events but ALL assigned to HIM Administrator Pool. High volume of deficiencies for HIM cleanup/analysis but still found this better than allowing deficiency to appear in provider in-baskets
 - New deficiencies created for paper/manual/telephonic dictation documentation that were missing signatures; keeping active for manual creation if needed in the future
- Scanning
 - Medical records collected/indexed documentation
 - Third party/contracted scanning was enlisted but was not as beneficial as we hoped due to work required on GBMC's IT team to upload the scanned documents
- Miscellaneous
 - Chart lock & medication administration record lock after discharge was removed to allow for backfill – would have created a lot of issues for various roles if it had been left in place

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Backlog

- Manager emailed staff to communicate when scanned records were available (scanned by alphabetic order of patient name)
- More outreach to providers occurred in order to get queries answered
- Extension granted from HSCRC for filing FY21 Q2 data (April 2021)
- Continual review of work queues
- Luckily, no staff taking vacation during this time
- Overtime was offered, not mandated
- PRN staff utilized



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Lessons Learned

- Advocating for staff remote access
- Query re-education to providers
- External scanning
- Scanned documents did not mirror electronic forms
- Order of scanned documents
- Missing documentation
- Reading scanned documents
- Missing components of documentation

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Full Return to Normal

- We'll let you know when we get there
- Return to concurrent coding & CDI-April 2021
- SMART reimplementation-September 2021
- 3M CDI Engage One-work in progress

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Celebrate Your Success!

- February 4, 2021
 - Prioritizing CareFirst and Medicare accounts
 - \$41.4 million to be coded
 - \$3.27 million held for queries
- March 4, 2021
 - Continued prioritization of CareFirst & Medicare accounts
 - \$10.9 million to be coded
 - \$9 million held for queries & incomplete documentation
- August 31, 2021
 - Continued prioritization of CareFirst & Medicare accounts
 - \$1.8 million to be coded
 - \$1.3 million held for queries & incomplete documentation

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Staff Recognition

- Staff awarded 8 hours personal holiday time to be used any time in 2021
- Four Aims Recognition (FAR) Award
 - Rewards employees that make exceptional contributions to the success of the organization related to its four aims of Better Health, Better Care, Least Waste, and More Joy
- Staff meals
 - Staff working all shifts were provided various meals
- “You’re the bomb”
 - Cocoa bombs were presented to all staff



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Thank you. Questions?

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