Outcomes through Technology 2016 at Bear Institute
Table of Contents

2016 at Bear Institute 4
Leadership Message 6
Timeline 8
Value Outcomes 10

Excellence and Outcomes 12
Enhancing Integrated Applications 14
Committed to operational excellence 16
Providing Scalable Innovations 18
Focused on Population Health 20
Keeping Patients Safe and Engaged 22

A Culture of One 24
Leadership and Governance 26
One Team, One Vision 28
Collaboration: Successes on a Global Scale 30
Innovation: Our Headquarters 31
Commitment: Recent Industry Recognition 32
Passion: Our Contributions 34

Our Future & Continued Transformation 37

Notes
2016 at Bear Institute
Dear Reader,

We celebrated the third anniversary of the Bear Institute partnership in October, and it is no surprise that we have seen a lot of improvements across Cerner and Children’s National since our start in 2013.

First, we would like to thank David Pierre, our former vice president of the Bear Institute and key leader in our organization. David has played an integral role in overseeing the implementation of processes and technologies we need for success, and with his recent transition, we will soon welcome a new Cerner leader to our team.

Besides leadership transitions, our organizational changes have involved a significant amount of progress and success as the partnership pays dividends for both organizations. Most importantly, our dedicated teams have continued the use of transformational healthcare information technology in 2016, improving the lives of children every day.

Our work has not gone unnoticed. We are pleased to report that U.S. News and World Report again recognized Children’s National for excellent care. This year, the magazine ranked Children’s National in ten specialties among the top 20 pediatric hospitals. Children’s National also received Magnet designation and the Top Hospital award from The Leapfrog Group for achieving the highest levels of quality and safety standards.

The Bear Institute received a particularly special recognition at this year’s 10th annual Children’s Ball, hosted in April by Children’s National President and CEO Kurt Newman and wife, Alison. Cerner was recognized with the 2016 Children’s Innovation Award for work accomplished by the Bear Institute. In addition to this award, major industry groups, including HIMSS, CHIME, and the DC Hospital Association (among others) continue to recognize the Bear Institute.
Transformational change and innovation have made us eligible for these acknowledgements. In the past year, we completed successful implementations of positive patient identification using barcoding for breast milk, blood transfusion and specimen collection, with medication administration soon to follow. As an important patient safety tool, barcoding is improving positive patient identification and reducing potential error risks to our patients.

In terms of innovation, the team continues to enhance and grow the solutions we have developed at the Bear Institute, including Quality Boards and Emergent Event (Trauma) documentation. Nanticoke Health Services in Delaware recently implemented Quality Boards and at present, most units at Children’s have implemented the tool as well.

We also have focused a significant amount of our work on population health management. We continue to build on the HealtheIntent platform, which aggregates Children’s data from disparate sources. In May, Children’s National went live on Asthma, Diabetes, Inflammatory Bowel Disease (IBD), and Cardiomyopathy HealtheRegistries, which will help clinicians track more than 16,000 children with these conditions. Our team plans to roll out multiple additional population health registries in 2017, which will help physicians, nurses and other clinicians better coordinate care and manage the health of children.

As these projects evolve, we have seen other changes throughout the organization in 2016. We have welcomed new leaders to our Bear Institute team and introduced new on-site events, including several reference visits, a Cerner MPages Developer conference and the first pediatric population health conference in March 2017 in Washington, DC.

Keeping our focus on positive transformations, our team launched a new cultural campaign in 2016 with a “culture of one.” Through this campaign, we promote innovation, collaboration, commitment, and passion as we work toward our vision: helping children grow to their highest levels of health and potential.

This 2016 Value Book demonstrates commitment to our vision of transforming pediatric health outcomes with information technology. As you read it, we hope you will reflect on our achievements from this past year as well as our goals for continued progress and success at the Bear Institute.

In the meantime, we will continue to find ways for children to live healthy lives and have access to the quality care they deserve. Thank you for reading.

Respectfully,

Liz Harvey, RN, BSN, MSN, BC
Interim Site Leader
The Bear Institute

Brian Jacobs, MD
VP, CMIO and CIO
Children’s National Health System
January 2016
Hosted All Children’s Hospital (St. Petersburg, FL) leadership for a reference visit

February 2016
- Deployed Tap’n Go login systems to Children’s PreOp and NICU
- Completed Wave 5 implementation of Ambulatory EHR. As of February 1, Children’s outpatient clinics and providers for more than 50 specialties are paperless

March 2016
- Rebuilt the Inpatient Charge Reconciliation Report and MPPage for Revenue Integrity to allow for quick data retrieval and avoid timeouts
- Upgraded Children’s Sharepoint infrastructure (supports their Intranet)

April 2016
- Successful upgrade of the Cerner Millennium 2015 system
- Completed collection of PEWS Star data and continue to work with Cerner MATH
- Due to Bear’s optimization efforts, Children’s providers no longer need to print lab requisitions for draws to be done in the organization
- Cerner accepts “2016 Children’s Innovations Award” at 10th annual Children’s Ball

May 2016
- Hosted 2016 Cerner MPages Conference event, where over 100 Cerner clients and associates attended at Children’s National
- Asthma, Diabetes, IBD, and Cardiomyopathy HealtheRegistries™ go live at Children’s
- As one of seven participating sites, Children’s National performs an annual upload of patient data to the NIH-funded Collaborative Critical Care Research Network (CPCCRN). We met this year’s deadline by using 100% of data obtained from HealtheIntent™
May 2016
Completed two successful client demos for Quality Boards.

June 2016
- Completed upgrades of network Uninterruptible Power Systems (UPSs)/closed out FY16 Switch refresh project with a total of 26 switches and 26 UPSs (Uninterruptible Power System)
- Children’s National is ranked in ten specialties among the top 20 pediatric hospitals by U.S. News and World Report 2016 - 2017

July 2016
- Onboard over 400 Children’s employees, students, and affiliates onto CNID system.
- Updated Citrix with new HP printer drivers to stabilize and improve printing performance in all clinics.

August 2016
- Started the PeopleSoft upgrade to version 9.2
- Upgraded internet facing firewalls to enhance cyber security
- Completed upgrade of iAware tracking boards in Children’s CICU

September 2016
- Successfully attested at (highest possible) level 3 for NCQA’s Patient-Centered Medical Home
- Completed server patching

October 2016
- Implementation and development partnership of Emergent Event (Trauma) Documentation Solution at Intermountain Health System begins

November 2016
- Successful go-live of pilot clinic with the direct-to-consumer telemedicine project (integrated within the Cerner EMR workflow)
- Presented on cyber security at CHIME ’16 CIO Fall Forum

December 2016
- Bridge Specimen Collection barcode technologies go-live
In 2016, we saved a total of $1,448,069 in transcription costs (compared to baselines).

Reduced outpatient transcription costs by 97.66 percent from $387,040 in June 2015 to $9,073 in November 2016.

We averaged a 422 percent increase in infusion services revenue, using documentation tasks.

Children’s National has realized $5,515,146 in revenue so far using infusion documentation tasks (started in September 2015).

Using Cerner Wellness in 2016, Children’s employees averaged 17,278 minutes of monitored health activity each quarter.

Post ambulatory rollout, wave 1 clinics recognized a 39% increase in daily average patients seen, while wave 2 clinics experienced a 22% increase in daily visits.
As of December 2016 using rapid sign-on solutions:
Nurses saved **1,815 hours** of average daily log-on time,
and physicians saved **44 hours** of average daily log-on time

**Time**

With additional Infusion Documentation tasks, Children's clinicians improved the compliance rate of infusion stop-time documentation to **72.3 percent** in November 2016 from **0 percent** in April 2014

**Compliance**

ePrescribe compliance rate has increased to **69 percent** from an initial **29 percent**

**Usage & Adoption**

Completed in February 2016, the Ambulatory EHR roll-out benefitted more than **450 providers**, **7 regional outpatient centers**, **17 hospital clinics**, and **15 smaller clinics** across **52 specialties and sub-specialties**

As of October 2016, **597 providers** utilize our integrated communication and secure messaging app, CareAware Connect, daily

**5,395 unique users** or approximately 80% of Children's National staff, has access to Virtual Desktop Interface (VDI) and rapid sign-on solutions

MyBearGuide (our patient engagement app) has been downloaded **2,499 times** by iOS and Android users

We created **4,300** Cerner Wellness accounts, which includes **72 percent** of employee population with an average of 507 unique logins each month (throughout 2016)
Improving financials

Outpatient providers began using Ambulatory electronic health record in June 2015, resulting in significant reductions in Children’s third-party transcription costs. In 2016, Children’s National saved a total of $1,448,069 in transcription costs, compared to baseline values, using Dragon Voice.

In addition, Children’s saves money by using infusion billing documentation tasks within its nursing workflow. Implemented in June 2014 when Children’s did not document infusion stop times, the stop-time documentation compliance rate has now reached 72.3 percent (as of November 2016). The improved accuracy of infusion documentation enables Children’s National to charge for 12 additional procedure codes for infusions services.

Carolyn Jepsen-Brown, MSN, RN, with Children’s National Nursing Informatics, explained that the workflow “elevates nursing to a higher level and shows that using Cerner technology, nursing documentation can generate revenue for a hospital.”

In 2016, Children’s National brought in an average revenue of $736,491 per quarter for infusion billing documentation tasks — a 422 percent increase when compared to baselines.

Using Infusion Documentation tasks “elevates nursing to a higher level and shows that using Cerner technology, nursing documentation can generate revenue for a hospital.”

Carolyn Jepsen-Brown, MSN, RN
Nursing Informatics
Children’s National Health System
Increasing efficiency

Virtual Desktop Interface and rapid sign-on solutions (known as “Tap ‘n Go” at Children’s National) allow providers to log directly into the EHR by simply tapping a Radio Frequency Identification (RFID) badge. Sessions also transfer with end-users from workspace to workspace.

In 2016, the Bear Institute team rolled out this capability across the entire organization for all clinical users. Our team deployed 1,240 Tap ‘n Go devices by mid-2016, and we also managed a targeted deployment of 78 second-generation Tap ‘n Go systems into Children’s Ambulatory workrooms.

The Bear Institute reports an average of 5,395 unique Children’s end-users (as of October 2016) for Tap’n Go across all devices - meaning that approximately 80 percent of Children’s National staff uses on a daily basis for both inpatient and outpatient care. The associated workflow results in significant time saved for both nurses and physicians.

Optimizing solutions

In June 2016, Bear Institute’s Business Intelligence team introduced Diagnosis Gadget – a customized view that pulls the diagnosis list into iAware from the EHR. This unique feature provides caregivers with a list of all conditions for which their patient is currently being treated.

In addition to iAware optimization, the Bear Institute customized to Children’s National workflow to develop a surgery-specific EHR MPPage. The project started in early 2016 and went live in June 2016. This MPPage provides pre-, intra- and postoperative information so nurses and providers have immediate and accurate information on the patient throughout their procedure and consequential treatments.

The MPPage is already introducing benefits for Children’s National:

- Contributes to patient safety, with increased visibility to the patient’s procedure and accurate hand-off documentation; provides an at-a-glance view of the patient for the PACU and other units treating post-operation.
- Improves depart documentation, specifically for the PACU discharging the patient with medication and education details.

By using the rapid sign-on solution Tap ‘n Go, providers saw the following efficiencies in average logon time for Dec. 2016:

- Nurses saved 1,815
  hours
- Physicians saved 44
  hours

Children’s National brought in an average revenue of $736,491 per quarter with infusion documentation in 2016.
Committed to operational excellence

Since the start of our partnership in 2013, the Bear Institute has worked to provide a solid foundation for Children’s IT infrastructure. The team identified opportunities for optimal performance with storage, network, servers, data center and security.

Help Desk support

Our IT Help Desk contributes to the organization’s optimal performance by going above and beyond basic password resets. We strive to resolve most requests upon first contact. The Help Desk system continually monitors critical factors, such as average time to answer, call volume, percent of calls immediately resolved and percent of calls dropped.

As of November 2016, call abandonment rates have dropped from 8.12 percent in September 2013 down to 0.18 percent on average. The Bear Institute maintained its First Contact Resolution at 68 percent, and 98 percent of Help Desk calls are answered in less than 30 seconds.

Cyber security

With technology becoming a more vital part of everyday lives at Children’s National, it’s important now more than ever to ensure patient data is secure. Cyber attacks are more prevalent in many industries, with threat numbers increasing throughout healthcare organizations just in the past year. In 2016, the Bear Institute’s cyber security team measured an average of 585,000 bad emails, 57,000 computer infections (including viruses and ransomware), and 165,000 internet threats (false links and phishing emails) per day for Children's staff.

The Bear Institute has the tools and processes in place to manage events and automatically block 99.5%* of threats. The team also manages 7 billion audit logs per month, which catch all online traffic by Children's associates. The system then filters and catches any known threats, including viruses, bad traffic and others. These tools and continued education help keep Children’s data (and its patients) safe.

* The remaining 0.5% is handled through Bear Institute and Children’s National incident response policy and procedures.
Network Security

The Bear Institute managed stable and secure network and systems in 2016, with 92.6% of servers meeting patch compliance and a consistent network uptime at 99.9%. The Bear Institute also completed its fiscal year network switch upgrade (with 26 switches) in June; now, Children’s backend switches are no longer on legacy hardware and will be supported for another seven to 10 years.

Along with switch upgrades, the Bear Institute Network team will be performing a wireless upgrade this year. When completed, this upgrade will introduce more stability, new features, and bug switches for Children’s National.

System access

Children’s National Identities (CNID) went live in August 2015 as a Bear Institute security initiative to authenticate new hires at Children’s National. This replaced Children’s old network access management system (eWorks) and helps validate employees’ identifies before granting them access to the system and upon departure from the organization.

The Bear Institute continues working closely with Children’s Human Resources to build out role profiles, which will eliminate the need for managers or new hires to request any system or application access. Ultimately, CNID will streamline on and off-boarding processes.

Today, CNID makes use of multi-factor authentication to ensure streamlined and secure access to Children’s systems. This authentication requires:

- Something the user knows - a password
- Something the user has - a security token, physical device, mobile phone
- Something the user is - a fingerprint or another ID

Issues resolved in the last 30 days: 6
Quality Boards

Quality Boards, an industry-recognized solution, helps Children’s National achieve goals of patient safety and quality care. Recognized by HIMSS, ACHE, and the DC Hospital Association, these highly visible digital dashboards display real-time quality and safety indicators.

Quality Boards are now available in most Children’s units, and the Bear Institute implemented a Quality Board for Nanticoke Health Services’ Progressive Care Unit (PCU) on December 9, 2016. The Quality Boards also earned the Bear Institute a major grant at $100,000 for continued development from the PNC Foundation.

The boards have improved the timeliness of care, as demonstrated by the improvements measured at Children’s Pediatric ICU (PICU) and detailed in September 2015’s Joint Commission Journal on Quality and Patient Safety:

• Dashboards decrease the average time from admission to treatment consent by 49 percent
• Dashboards lower the percentage of patients with urinary catheters in place for more than 96 hours from 11% to 4%
• Dashboards improve completion of medication reconciliation to 92 percent from 80 percent
• Dashboards decrease the rate of Catheter Associated UTIs by 31 percent during period of Joint Commission study

Providing scalable innovations

The Bear Institute Innovations Team is responsible for creating new and marketable innovations that focus on patient engagement, population health, quality, safety, and precision medicine. The Bear Institute intends to focus on six unique solutions, four of which are targeted for roll-out at Children’s National within the fiscal year.

“Being able to innovate at the point of use and need allows us to rapidly prototype, develop and gather feedback to be agile and deliver.”

Kris Nessa
Lead of Innovations
Bear Institute
Emergent Event (Trauma) Documentation
The team recently installed the Emergent Event (Trauma) Documentation solution into Children’s production domain, allowing end users to conduct parallel testing between paper and the electronic solution. The team continues to code additional enhancements, ensuring the success of the solution for Children’s National and other Cerner clients. The solution was featured at the 2016 Cerner Health Conference and continues to generate significant interest from other organizations.

Improving the Patient Experience
The Bear Institute continues to manage MyBearGuide - a mobile app to assist patients and families with hospital navigation. Redesigned and maintained in 2016, this app helps alleviate visitor stress by giving parents a smartphone tool that provides step-by-step wayfinding, displays emergency department wait times and outlines other hospital services and amenities. Since its creation in December 2014, iOS and Android users have downloaded the app a total of over 2,400 times.

Along with MyBearGuide, the Bear Institute Innovations team is also working on a Family-Centered Rounds application suggested by a Children’s National provider. The application will improve the rounding experience for clinicians as well as patients and families, and it was featured at the November 2016 Cerner Health Conference.

Finally, the team recently integrated (and continues to test) virtual visit technology in the Cerner EHR, allowing patients to have video conference appointments with their providers. Partnering with a third party vendor, the Innovations team successfully piloted the Direct-to-Consumer telemedicine system at Children’s National on November 30, 2016. The team plans to continue rolling out this functionality throughout the organization.

Additional Innovations Projects
The Bear Institute Innovations Team is keeping busy! In addition to our projects already detailed, the team continues to develop the following:

- **Inpatient Diabetes Management Dashboard**, a SMART on FHIR application with features including blood glucose graph, relevant lab results, insulin therapy review, and an insulin dosage calculator that helps providers manage the care of patients with Type I and II diabetes.
- **Inpatient Charge Reconciliation 2.0**, a version in final stages of development and intended to meet unique needs of clinicians, billing team, and system performance. The Custom Columns within the MPage Worklist framework allows clinicians to reconcile and audit their inpatient charges for the day and previous four days.
- **New Results Indicator**, an MPage (in final stages of development) uses the existing New Results indicator within the PowerChart patient list workflow.
- **PEWS Star™**, is co-developed with Cerner Math®, and is a predictive algorithm to lessen physiological deterioration in children.
- **MPages Worklist Framework** and working with Cerner team on enhancements.
Focused on Population Health

Children’s National is dedicated to keeping children happy and healthy outside the walls of the hospital. With the Bear Institute, the organization is committed to population health management and leveraging data analytics from numerous sources—engaging patients to better manage their health.

Our data platform

The Bear Institute began aggregating health data from Children’s and community clinical and financial systems on to Cerner’s HealtheIntent™ enterprise data warehouse in 2015. This cloud-based data platform is multi-purpose and programmable, enabling teams to gather, transform, and reconcile data across the continuum of patient care.

Using HealtheIntent, Children’s providers and care teams can identify, score and predict the risks of patients, allowing them to match the right care programs to the right individuals. In 2016, we have worked to normalize, standardize, and import data from enterprise data sources into the platform.

In October 2016, Bear Institute introduced the Clinical Data Discovery model, allowing interactive data exploration to tell a story and a user to manage data with ease. Using SAP Business Objects, Clinical Data Discovery allows clinicians to view, sort and analyze business intelligence data, contributing to population health management.

Disease-specific registries

Cerner Healthe Registries™ helps Children’s National manage activities toward improving the health of these patients who traditionally require more care. The registry data continuously flows through the HealtheIntent platform, providing near real-time views of patient information and performance measures.

In June 2016, the Bear Institute worked with Children’s subject matter experts to define requirements and clinical measures to implement four standard disease registries, including:

- Cardiomyopathy
- Asthma
- Diabetes
- Inflammatory bowel disease

For patients in cardiomyopathy registry

51.53% completed important laboratory work
Children’s National patients have already seen considerable results from these registries, including:

As of December 14, 2016 (results are in near real-time):

- For patients in asthma registry:
  - 28.94% patients met their tobacco exposure screening test
  - Per visit tracking, only 10.6% had an ED visit
- For patients in cardiomyopathy registry:
  - 51.53% completed important laboratory work
  - Tracked echocardiograms completed for 15% of outpatients & 85% inpatients
- For patients in diabetes:
  - 45.87% had hemoglobin A1C < 9%
  - 58.63% had hemoglobin A1C < 10%

In 2017, the Bear Institute will follow a similar process for implementing health condition registries including:

- Sickle Cell
- Complex Care
- Scoliosis
- Autism Spectrum Disorder
- Epilepsy
- Pediatric Wellness
- Adolescent Wellness

**Sharing our expertise**

Children’s National, with sponsorship from Cerner, will host the first Population Strategies for Children’s Health event in March 2017. This conference will convene national pediatric provider leaders to focus on population health with conversations around big data, care coordination, and population health policy as they relate to caring for the millennial population. Attendees will take away valuable approaches from peers and industry experts on parallel strategies and initiatives towards success: involving communities, provider networks, policy change, and innovative technologies.
Eliminating errors in patient identification

As a major health IT initiative with the Bear Institute, Children’s National has nearly completed its journey of bringing Positive Patient Identification (PPID) to the point of care by using barcode technology. Barcode technology eliminates human errors in patient identification at various points of care by matching patients, caregivers and medications with permanent records for administration, introducing these and other benefits:

- Eliminate errors to improve patient safety
- More timely and accurate documentation
- Steps towards achieving HIMSS Analytics Stages 6 and 7

When the full effort is complete, clinicians will use barcoding to transfuse blood product, collect specimens, and administer breast milk and medicine. The PPID project has several components that are going live at different times during Children’s FY16 and FY17, as shown in the timeline to the right.

Making tracks

After a phased implementation in five waves, the Ambulatory EHR (Bear TRACKS) roll-out completed in February 2016. The project was a multidisciplinary effort involving 150 experts, affecting more than 450 providers, seven regional outpatient centers, 17 hospital clinics, and 15 smaller clinics across 52 specialties and sub-specialties.

The Ambulatory roll-out included Cerner Scheduling, which the Bear Institute team continued to focus on throughout 2016 as part of optimization efforts. The team also introduced the outpatient specialty care patient portal, MyChildrensNationalPortal, in August 2015. Since then, the patient portal claim rate has doubled to 22% with 4,667 accounts claimed as of November 2016.

Children are special, and we believe that children’s medicine should be, too. Given the dynamic state of both a child and pediatric hospital, we know that high quality healthcare delivery is necessary with our Bear Institute technologies.
PPID timeline

SunQuest Collection Manager 6/15
Timeless Medical Systems® Breast Milk NICU 2/16
Bridge Specimen Collection 12/16
Breast Milk house wide FY18
Wristband Redesign 1/16
Bridge Blood Product Transfusion 6/16
Care Admin Medication Administration 2/17

PPID results

5,184 blood transfusions have been given using Bridge barcoding technologies
(June 6th go live to November 2016)

7,787 breast milk feedings successfully administered using PPID Timeless technologies in the NICU
(February 2016 go live to September 2016)

6,034 specimen tests collected and confirmed in a total of 3,754 containers.
Of these, 95.6% were scanned at confirmation
(Since early December 2016 go live)
Bear Institute
A Culture of One
Steering Committee Leadership

Children’s Leadership

Kurt Newman, MD
President and Chief Executive Officer

Kathy Gorman, MSN, RN, FAAN
Executive Vice President and Chief Operating Officer

Alec King, MBA
Executive Vice President and Chief Financial Officer

Denice Cora-Bramble, MD, MBA
Chief Medical Officer and Executive Vice President of Ambulatory and Community Health Services

David Wessel, MD
Executive Vice President and Chief Medical Officer

Brian Jacobs, MD
Vice President, Chief Medical Information Officer and Chief Information Officer

Linda Talley, MS, BSN, RN, NE-BC
Vice President of Nursing and Chief Nursing Officer

Elizabeth Flury, MA
Executive Vice President and Chief Strategy Officer

Mark Batshaw, MD
Executive Vice President, Physician-in-Chief and Chief Academic Officer

Cerner Leadership

Don Bisbee, MBA
Senior Vice President, Strategic Business Units

Joanne Burns, RN, MPA
Senior Vice President and Chief Strategy Officer

Marcos García, MBA
Vice President, ITWorks

Mike Heckman, MBA
Vice President, Population Health

Eva Karp, RN, MBA
Senior Vice President and Chief Clinical Officer

Liz Harvey, MSN, BSN, RN, BC
Interim Site Leader - The Bear Institute
Governance

Operations Committee

Children’s National

Brian Jacobs, MD
Vice President, Chief Medical Information Officer and Chief Information Officer

Chad Wilson
Director, IT Security

Kathy Gorman, MSN, RN, FAAN
Executive Vice President and Chief Operating Officer

Denice Cora-Bramble, MD, MBA
Chief Medical Officer and Executive Vice President, Ambulatory

Mary Daymont
Vice President, Revenue Cycle

Amy Walsh
Director, Business Development-IT Services

Lauren Fisher
Vice President, Marketing

Martha Parra
Vice President, Clinical Support Services

Rahul Shah, MD
Chief of Quality and Safety Officer

Cerner

Liz Harvey, MSN, BSN, RN, BC
Interim Site Leader - The Bear Institute

Lisa Fitzpatrick
Senior Manager, ITWorks Client Management

John Grice
Engagement Leader, ITWorks

Kris Nessa
Lead of Innovations

Edward Cook
Executive Director, Human Resources Services

Simmy King
Interim Director, Nursing

Tonya Kinlow
Vice President, Community Engagement

Tyrone Bland
Systems Engineer, Radiology

Elizabeth Flury, MA
Executive Vice President and Chief Strategy Officer

Laurie Hogan
Service Director, Radiology

Mark McGuire
Director of Lab Operations

Anthony Sandler, MD
Chief of Surgery

John Schultz
Director, Call Center

David Wessel, MD
Executive Vice President and Chief Medical Officer

The Operations Committee oversees the roadmaps, implementation plans, business requirements and marketing activities.

Innovations Committee

Children’s National

Brian Jacobs, MD
Vice President, Chief Medical Information Officer and Chief Information Officer

Peter Kim, MD
Vice President, Sheikh Zayed Institute for Pediatric Surgical Innovation

Craig Futterman, MD
Medical Faculty

Marshall Summar, MD
Chief, Genetics and Metabolism

Gregory Baker
Director of Business Development and Tech Commerce

Jessica Herstek, MD
Attending, Hospitalist Medicine

Pamela Hinds, MD
Nursing Director of CRC

Michelle McGuire, MBA
Chief of Staff

Martha Parra
Vice President, Clinical Support Services

Graig Sable, MD
Attending, Cardiology

Rahul Shah, MD
Chief of Quality and Safety Officer

Cerner

Hillary Biskner
Vice President, Clinical and Global Strategic Business Units

David McCallie, Jr., MD
Senior Vice President, Medical Informatics

Zach Wood
Director and General Manager, Member Engagement

Kris Nessa
Lead of Innovations

Liz Harvey, MSN, BSN, RN, BC
Interim Site Leader - The Bear Institute

The Innovations Committee reviews innovation proposals and projects which center on patient engagement, quality, safety, population health, and precision medicine.
One Team, One Vision
Our Mission
Enhance the foundation of health care technology and develop cutting-edge innovations to improve pediatric outcomes.

Our Vision
We contribute to a future where children grow to their highest levels of health and potential.

Our Guiding Values

Collaboration
We work together to achieve organizational goals - being engaged, present, and inclusive in all interactions.

Innovation
We provide creative and expert solutions that fulfill business needs and deliver value.

Commitment
Driven by the client’s goals, we take ownership of our work to create positive change.

Passion
We are excited to be part of an organization that contributes to improved health outcomes for pediatric patients.
Explaining the theme of the 2016 Children’s Ball, Capital Splendor, Dr. Newman said, “Just as people come from all over to see the Cherry Blossoms and celebrate the global partnership they represent, families from across the country and around the world seek out Children’s National for the best care for their children.”

At Children’s National, the Bear Institute’s technology advancements are generating national and international interest. Other organizations, hoping to capitalize on the operational excellence and innovation achievements, reference our work. Children’s National continues to host site visitors from locally, regionally, nationally and internationally prominent healthcare institutions—from the government and many other important entities.

The Bear Institute continues its collaboration efforts within Cerner, too. We presented on Quality Boards and participated in 2016’s pilot ITWorks Institute share sessions—monthly virtual conferences featuring innovations from other Cerner ITWorks organizations. We also shared our achievements at 2016 Cerner Health Conference and hosted the 2016 MPages Developer Conference for developers and engineers at Cerner client sites.

Our team looks forward to continued collaboration as Children’s National and the Bear Institute continues to advance improvements in care, quality, safety, innovation and research.

“We are proud to see such transformational success from the industry’s first pediatric health IT institute,” said Cerner President, Zane Burke. “Cerner and Children’s National continue to work toward a shared vision of helping children get the best possible start to long, healthy lives.”

At Bear Institute, we...

1. Recognize **one team** is stronger than many.
2. Are present in daily work and remain **engaged** in all interactions.
3. Share best practices and are **inclusive**.
4. **Trust** our teams and our organization.
Most of our innovative development takes place at the Innovation & Learning Center at Children’s main hospital campus. There, the Bear Institute’s Innovations team works side-by-side with providers to rapidly develop first-of-kind innovations and advance the Children’s IT roadmap. The solutions we develop together improve safety, quality, patient and families’ experience. The Innovations team shares the state-of-the-art Innovation & Learning Center with Clinical and Translational Science Institute and the Department of Nursing Research.

The Bear Institute Innovations team is responsible for creating innovations that focus on patient engagement, population health, quality, safety, and precision medicine. Our team encourages idea submissions, with a formal submission process and annual events to engage Children’s and Cerner staff. The Innovations team performs initial vetting before moving the idea to a larger Innovations Committee, followed by the Steering Committee. If these governing bodies approve, the Bear Institute develops the innovative solution.

“Innovations come in all shapes and sizes,” said Kris Nessa, lead of innovations. “What’s important is the ‘why’. Why is the Innovation desired and how can this improve health of our patients and communities?” she said.

Along with solutions internal to Children’s National, the Bear Institute is rapidly developing health IT capabilities at the Innovation & Learning center, including (but not limited to):

- Quality Boards, industry recognized and implemented at most Children’s National units (with an additional three units currently in progress)
- MyBearGuide, with over 2,400 iOS and Android mobile downloads
- Direct-to-Consumer, telemedicine
- Emergent Event (Trauma) Documentation solution, installed and side-by-side production testing since June 30, 2016
- Family-Centered Rounds to improve the rounding experience for both staff and families
- PEWS Star™, an algorithm co-developed with Cerner Math® to predict physiological deterioration
- Inpatient Diabetes Management Dashboard, using SMART on FHIR

“At the Bear Institute Innovation and Learning Center, our talented team continues to explore the leading edge of high quality care delivery, patient safety, patient and family engagement, telehealth and precision medicine.”

Dr. Brian Jacobs
Vice President, Chief Medical Information Officer and Chief Information Officer
Quality Boards have not only made an impact at Children’s National; the solution has received significant accolades this year. In May, for example, the innovation received $100,000 for continued research and development from PNC Bank’s Florence P. Nesh fund. The next month, Quality Boards were recognized by the Washington DC Hospital Association (DCHA) with the “Patient Safety Award.” Dr. Jacobs, Nessa, and several members of the Bear Institute/Children’s team accepted the award at a November banquet.

In addition to an April HealthcareITNews article, Quality Boards were also featured in a February presentation by Dr. Jacobs and David Pierre for the American College of Healthcare Executives’ (ACHE) Congress on Healthcare Leadership.

**Becker’s Hospital Review**

With the Bear Institute, Children’s National was named to the *Becker’s Hospital Review* 2016 edition of “50 Hospitals with Innovation Programs” in October 2016. This list recognizes hospitals and health systems that are committed to improving healthcare by tackling some of the biggest challenges facing patient care and care delivery.

“We are honored to be recognized for our commitment to innovation in healthcare information technology to help our children,” said Dr. Jacobs.
Children’s Innovation Award - Children’s Ball
Children’s National Health System honored Cerner with the Children’s Innovation Award for the advancement and innovation of pediatric care through the Bear Institute. Dr. Kurt Newman, president and CEO of Children’s National, presented the award to Cerner President Zane Burke at the 10th annual Children’s Ball on April 15.

“Cerner’s innovations support our ability to help children reach their full potential and provide access to quality health care,” said Dr. Kurt Newman, president and CEO of Children’s National, “Cerner’s work is driving quality, safety and financial benefits to our organization while improving outcomes for children and providing a better experience for families.”

Healthcare Information and Management Systems Society (HIMSS)
Dr. Jacobs and David Pierre presented a noteworthy session, Establishing a Health IT Innovation Program - Early Successes, at the HIMSS ’16 Conference in March.

“Kris Nessa, Bear’s Lead of Innovations, was nominated for HIMSS new and unique Most Influential Women in Health IT program. Results are announced in early 2017, and the award celebrates “female visionaries harnessing the power of IT to transform health and healthcare.”

Cyber security
Cyber security has generated a significant amount of recognition for the Bear Institute in 2016. Chad Wilson, Children’s National Director of Security, leverages his expertise and works closely with the Bear Institute team on these opportunities. Chad was featured in Healthcare Tech Outlook and on a HIMSS Media Webinar with Bear Institute manager, Ben Abramovitz. With Bear Institute Director of Project Management Operations, Adam Sears, Chad presented at the CHIME ’16 Fall CIO Forum.

Mr. Wilson also presented at 2016 Cerner Health Conference on a power-session panel on cyber security with Cerner’s COO, Mike Nill, and Cerner’s Chief Security Office (CSO), Don Kleoppel, among others.
Bear Institute associates are excited to work for two organizations that are improving the health of children each day. See how we have been involved with Cerner Corporation and Children’s National in 2016.

Cerner-sponsored events

Cerner DAISY Program
At an individual level, Bear Institute Strategist, Ian Crumbley, RN, accepted the 2015 Cerner DAISY award in December 2015. Nearly 2,000 healthcare organizations in 15 different countries partner with the DAISY Foundation to recognize and honor nurses who do extraordinary work. Ian was recognized for his excellent service to Children’s National and the Bear Institute.

Cerner Health Conference and Pediatric Leadership Council
Later in the year, Bear Institute leadership presented at Children’s Pediatric Leadership Council (PLC) on several topics, including population health. In November 2016, the team traveled to Cerner’s headquarters for the 31st annual Cerner Health Conference. The Bear Institute featured Emergent Event (Trauma) Documentation and other innovations, and the team presented the most education sessions in the Bear Institute history on topics ranging from barcoding to cyber security and population healthy.

Cerner MPages Developer Conference
In May 2016, we hosted the Cerner MPages Developer Conference, where more than 90 Cerner clients and associates attended from 35 different healthcare organizations from throughout the United States. Targeted to developers and engineers, the conference attracted an engaged and informed audience.
Children’s events

Children’s Ball 2016
Chaired by Dr. Kurt Newman and his wife Alison, the 10th annual Children’s Ball on April 15 celebrated the hospital’s integral role as in the nation’s capital. More than 800 attended the black tie evening at the Ritz-Carlton in Washington. The event included a festive cocktail reception and gourmet dinner, dancing, entertainment, an online auction, and a live auction.

“What sets the Children’s Ball apart is our mission," said Dr. Newman "This event is about kids, and for kids. Philanthropy is key to our ability to help children not just grow up, but grow up stronger.” The 2016 Children’s Ball raised more than $3.2 million towards Children’s National children and families.

Bear Institute and Cerner were proud to be honored at this year’s event with the Children’s Innovation Award, in recognition of our work to leverage technology towards improved health outcomes.

Junior Council’s Dancing After Dark
The Bear Institute was pleased to help sponsor Children’s National Junior Council for its ninth annual Dancing After Dark event on January 29 at the Mellon Auditorium. The event, which raised more than $165,000, focused on community, as Dr. Mark Weissman and Dr. Marcee White (Diana L. and Stephen A. Goldberg Center for Pediatric Community Health) made remarks about the work of Children’s National in underserved neighborhoods in Washington, DC.

The Junior Council is composed of young professionals, emerging community leaders, and children’s health advocates who are dedicated to supporting Children’s National through fundraising events and volunteering activities.

DC Hospital Association Banquet
In November 2016, Cerner sponsored the District of Columbia Hospital Association (DCHA) for its annual awards banquet in Washington, DC. Children’s National is a member hospital of DCHA, and it sent 10 executives to the banquet, as well.

The Bear Institute won the DCHA’s Patient Safety award for Quality Boards at the banquet. Nessa and Crumbley from the Bear Innovations team, along with Dr. Jacobs, Dr. Futterman, Amber Merritt, and Eliana Maldonado from Children’s, attended to accept this award.

Photo Credit: Jaime Windon
As we celebrate our accomplishments, we look to the future and how we will continue to help clinicians deliver higher quality, safer care for children. Our areas in early development or scheduled for future focus for fiscal year 2017 - 2018 include:

**Excel in integrating applications**
- Cerner Revenue Cycle
- Radiology (RadNet) implementation
- Barcoding - medication administration with Cerner CareAdmin
- Optimization efforts in the inpatient, ambulatory and perioperative environments
- CareAware Infusion Suite and automated billing

**Advance value and population health**
- Population Strategies for Children’s Health (PSCH) - March 2017
- Many additional HealtheRegistries
- Clinical Data Discovery Model

**Innovate at the edge of pediatrics**
- Focus on Emergent Event (Trauma) Documentation
- Algorithms towards improved outcomes
- SMART on FHIR application development
- Leveraging our experts and collaborating with others