CHILDHOOD CANCER AND BLOOD DISORDERS NETWORK
2017 RENEWAL TOOLS

HOW TO RENEW

To renew, simply submit a completed Childhood Cancer & Blood Disorders Network Renewal Form to Gena Paulk via email at gena.paulk@childrenshospitals.org.

Fee: The fee for the 12-month renewal is $10,000.

- Do NOT submit payment with your form; your hospital will be invoiced after we receive your renewal form.
- The invoice will be emailed to the person you designate as the Billing Contact on your form. If your hospital requires invoices to be sent directly to an Accounts Payable department, please provide an appropriate Billing Contact in Accounts Payable.

RENEWAL QUESTIONS?

Contact Cherie Thomas, 913-981-4199 or Cherie.thomas@childrenshospitals.org.

RESOURCES FOR DECISION MAKERS

In the following pages, we’ve assembled important points to support conversations with decision makers in your hospital.

- SBAR for Renewal Decisions
- Program Description
- Impact, Benefits and Services
- What’s New for 2017
Our Progress

7% reduction in ambulatory CLABSIs
150 ambulatory infections prevented
Over $5.2 million saved

366 physicians have received Maintenance of Certification credit as of June 2015
Over 8.7 million ambulatory central line days collected

Nurses eligible for 54.5 contact hours since October 2013

5 journal articles published; 3 in development

At least 10 hospitals used CCBDN data for Magnet Recognition
**Situation**
- We would like to renew participation in the Childhood Cancer & Blood Disorders Network (CCBDN) from the Children’s Hospital Association.
- The participation fee is $10,000 for 12 months and we will be invoiced in January.

**Background**
CCBDN is the only program in the country focused on CLABSI prevention for ambulatory patients.
- **Large scale:** 25 hospitals currently participate.
- **Our role:** We implement an evidence-based central line maintenance bundle, and submit monthly data on rates, process compliance, and infections. We engage families with effective education and support for home line care.
- **Data services:** We receive monthly reports on our unit’s performance; the performance of the collaborative in aggregate; and the performance of all other participating units.
- **Training services:** We have a virtual learning network, including virtual workshops (via WebEx – no travel required!), learning webinars, office hours team consulting, an online community, and resource library including a Practice Inventory of processes and products.
- **Multi-disciplinary:** Collaborative teams are multidisciplinary, including physicians, nurses, quality specialists, and infection control professionals and infectious disease subspecialists.
- **MOC and CNE:** The collaborative is approved by the American Board of Pediatrics for maintenance of certification (MOC). Workshops are American Nurses Credentialing Center (ANCC)-approved for CNE and CCBDN participation can be used to support Magnet Recognition®.
- **Sponsored by:** CCBDN is an ongoing service of Children’s Hospital Association providing quality and safety experts, clinical faculty, staffing, and all infrastructure for hospitals to collaborate on quality and safety programs.

**Assessment**
- **Effective:** The network is very effective in ambulatory CLABSI prevention, preventing more than 150 ambulatory infections saving an estimated $5.2 million to date.
- **Higher impact in outpatient setting:** Focusing on ambulatory CLABSI prevention is high-impact; studies estimate that there are 3 outpatient CLABSI for each inpatient CLABSI in hem/onc outpatient populations. Participating hospitals have reduced rates by as much as 70%.
- **Cost efficient:** The 2017 virtual model reduces hospital costs with reduced participation fees, no travel costs, and the option for increasing participation locally.
- **Family/Patient Engagement:** We are implementing strategies to educate and engage families in the care of their own lines, the most important component of ambulatory infection prevention.
- **New knowledge:** CCBDN data is being used to understand more about BSIs; one manuscript was published this year on line type selection, two manuscripts are close to publication and there are two more in development.
- **We can leverage participation:** Connecting with teams at other hospitals cuts down on trial and error to find effective solutions; enabling us to learn new skills and techniques that extend beyond CLABSI (family engagement, hand hygiene, wound care, blood cultures). The collaborative integrates Infection Control professionals and Infectious Disease subspecialists into the work. Team work can be improved on the unit, benefitting all.

**Recommendations**
- We recommend that we renew participation in the Childhood Cancer and Blood Disorders Network for 2017.
PROGRAM DESCRIPTION:
CHILDHOOD CANCER AND BLOOD DISORDERS NETWORK

The Childhood Cancer and Blood Disorders Network (CCBDN) prevents central line infections in ambulatory pediatric patients with cancer and blood disorders. CCBDN’s mission is to improve care and outcomes for ambulatory patients with cancer and blood disorders by using large-scale collaboration to rapidly identify and spread effective interventions across pediatric care settings.

Ambulatory CLABSI Prevention

Sixty percent of pediatric patients with cancer and blood disorders have long-term ambulatory central lines and there are 3 times more ambulatory CLABSIs than inpatient CLABSIs in pediatric cancer patients. Implementing a care bundle in the ambulatory setting has been shown to reduce the rates of central-line associated bloodstream infections significantly. Line care maintenance in the ambulatory setting is performed by clinic nurses, home health nurses and patients/families, so standardization of care and extensive training and follow-up with families are important infection prevention strategies.

CCBDN Impact

As of August 2016, Childhood Cancer and Blood Disorders Network sites prevented an estimated 150 ambulatory CLABSIs, and saved an estimated $5.2 million. Preventing ambulatory CLABSIs means preventing hospitalizations; 69% of ambulatory CLABSIs result in hospitalizations with LOS of 6 to 7 days. Published costs of treating CLABSIs run from $25,000- $45,000 (median charges of $37,000), so preventing just one infection in your unit pays for multiple years of participation in the Network.

Monthly CLABSI Rate with Control Limits: November 2011 to August 2016
2016 Highlights

- **CLABSI Outcomes/Mortality Project:** Retrospective chart review from 17 institutions of 947 patients who developed a BSI from November 2011-April 2015 to determine outcomes (ICU stay, line removal, death). Preliminary results presented as an abstract at American Society of Pediatric Hematology/Oncology 2016 annual meeting.

- **Median charge for central line associated bloodstream infection is an estimated $37K for 6-day hospitalization:** Dana-Farber/Boston Children’s conducted retrospective analysis of outpatient bloodstream infections that resulted in hospitalization: 84% of hospitalizations analyzed were due solely to BSIs *(Wong et al).*

- **Identified that ports are associated with 56% of line infections for pediatric hem/onc patients in the ambulatory setting (Hord et al):** Recognition that interventions beyond the current CLABSI prevention bundle that are more applicable to the externalized central lines are needed to address the CLABSI noted in patients with implanted ports in the ambulatory setting. Port Infections Innovation Group developed a modified event form to capture more data on this population so interventions can be identified.

- **Collaboration with CDC's National Healthcare Safety Network (NHSN):** CCBDN held a joint webinar with NHSN colleagues to discuss how CCBDN adapted NHSN BSI definitions for ambulatory BSI adjudications. NHSN currently does not track BSI, including CLABSI, in the ambulatory setting but is interested in this area, especially for the hematology-oncology patients and is learning from the CCBDN experience.

- **Build a shared learning network model for ambulatory BSI prevention:** Nine innovation groups comprised of and led by site representatives launched during 2015-2016 and completed their self-set goals within six months.

- **Data informs new interventions for home line access:** CCBDN is using our data on home line care and home care giver training effectiveness to test new approaches for improving line care in the home setting.

- **Optimizing line type selection to minimize opportunities for infection:** Innovation Group developed an algorithm to guide teams in the appropriate selection of line type.

- **Creating a library of education tools for staff, patients and families:** Caregiver Education Innovation Group compiled an inventory of over 40 educational materials for staff, patients and families. Teams continue to submit tools for inclusion on the CHA website.

- **Engaging patients and families:** Seven family members attended the joint SCOPE/CCBDN May workshop to share their perspectives and experiences as caregivers. The CCBDN Patient and Family Engagement Innovation Group created a primer on how to start and work effectively with a patient/family advisory council.

Research, Publishing and Presenting

- **Published:**

- **Submitted for publication:**

- **In progress:**
  - *Outcomes of inpatient pediatric hematology/oncology patients with a central line who develop a bloodstream infection*. To be submitted for publication by December 2016. Preliminary results presented at as an abstract at American Society of Pediatric Hematology/Oncology 2016 annual meeting.
  - *The Burden of Bloodstream Infections in Ambulatory Pediatric Hematology/Oncology Patients with Central Lines*. To be submitted to *Pediatrics* by December 2016.
  - *Mucosal Barrier Injury Laboratory Confirmed Bloodstream Infection (MBI-LCBI) in Pediatric Hematology-Oncology patients: Lessons Learned, Challenges Ahead*. To be submitted for publication by December 2016.

**Benefits**

✓ Improve safety and quality for patients.

✓ Improve faster and at lower cost than working independently.

✓ Solve small sample size/rare event problems.

✓ Implement what works, reduce trial and error.

✓ Reduce costs by sharing infrastructure, avoid design and development costs.

✓ Clinician buy-in because CCBDN is designed for clinicians, by clinicians.

✓ Approved by the American Board of Pediatrics for maintaining certification.

✓ Nurses earn continuing education credit.

✓ Meet Joint Commission standards.

✓ Improve safety culture.

✓ Expand staff QI know-how and experience.

✓ Reinforce your hospital’s quality brand.

**Benefits beyond the Collaborative**

✓ You can leverage new skills and methods for widely applicable challenges such as hand hygiene, wound care, infusion practices, blood cultures, and more.

✓ Your unit can spread evidence-based CCBDN bundles to other hospital units for even greater impact.

✓ Earn MOC credit: Well over 400 physicians have earned MOC credit since 2007 through QTN programs.

✓ Nurses earn continuing education credit.

✓ You have opportunities to present at meetings and conferences.

✓ Your team learns new ways to talk with parents and families about infection prevention techniques.

✓ Your working relationships improve within and across units.
Services

CCBDN provides participating hospitals with infrastructure and services so front-line clinicians can focus on making care safer and improving outcomes for patients, at a cost far below what your hospital would spend to design and implement an equally robust infection prevention program.

✓ Web-based data collection system
✓ Monthly data analysis
✓ Custom monthly site performance report
✓ Monthly aggregate analysis, reporting and benchmarking
✓ Virtual learning events
✓ Training on interventions
✓ Team coaching from QI experts
✓ Exclusive access to Team Practices Inventory, cataloging use of line care products and procedures
✓ Access to collaborative data assets for analysis, research and publication
✓ QI methodology training
✓ Nationally recognized faculty, including physicians and nurses
✓ Implementation experts
✓ Tools and curriculum
✓ Faculty-led clinical design and planning
✓ Access to the CCBDN listserv, professionally moderated and exclusively for participants
✓ Opportunities to share experiences and learn from peers

Transparency with Shared Data

CCBDN operates on principles of data transparency within the collaborative. Participating sites agree to share their data openly within CCBDN, while respecting the confidential nature of the data outside each collaborative. All participating sites have access to the aggregated data for research, analysis and publishing.
What’s New for 2017?

- **Virtual learning** will be the focus of the activities in 2017. Virtual workshops (via WebEx) will offer opportunities for sharing lessons learned, networking and local teamwork. By removing the cost of travel from these events, more team members can be exposed to the improvement work of the other Collaborative teams and engaged in the work at the local level. In addition to these milestone events, expert webinars and office hours with clinical and QI experts will provide opportunities to remain connected to the work of the Collaborative and to continue to build upon the work at each hospital. The library of tools and resources available on the CHA website will continue to expand as well.

- **Refocusing on compliance with the bundle in clinic.** Staff turnover has challenged teams to remain consistently compliant with the maintenance bundle. Reeducating staff and assessing skills quarterly will ensure that all staff have the proper knowledge and skills to implement the bundle accurately. Monthly compliance audits will be restarted to monitor progress.

- **Continuing to monitor compliance with the bundle in the home.** Data captured in the forms - Central Line Patient/Caregiver Initial Education/Training Compliance Form and the Ambulatory Central Line Care Assessment form - will highlight areas needing improvement in the education of patients and families, as well as home health care nurses.

- **The updated Practice Inventory**, available exclusively to Childhood Cancer and Blood Disorders Network participants, is a valuable collaboration and reference tool documenting participating teams’ products and procedures for line care. The Practice Inventory covers type, brand, and use of caps, antimicrobial catheters, securement devices and much more. The Practice Inventory expands shared learning and provides a resource for teams when they are looking to change clinical practice, policies or equipment.

- **Expansion of staff and patient education resources and tools on the CHA website.** “Stealing shamelessly” is a term that is used in the improvement world to highlight the value of learning from the work that others have already developed, tested and implemented in their local setting. By building on the existing library of tools on the CHA website, teams will be able to improve faster and at a lower cost than if they had to develop new tools themselves.

For More Information

Contact [Cherie Thomas](mailto:cherie.thomas@childrenshospitals.org), 913-981-4199 or [cherie.thomas@childrenshospitals.org](mailto:cherie.thomas@childrenshospitals.org).
Key Driver Diagram for 2017 Childhood Cancer & Blood Disorders Network

**AIM**

Reduce CLABSIs in children with cancer and blood disorders in the outpatient and home setting

**KEY DRIVERS**

- Standardize care for children with cancer and blood disorders in the outpatient clinic
- Standardize bundle implementation with home health agencies
- Standardize education/training for patients and caregivers to care for the line at home
- Standardize care for children with cancer and blood disorders across organizations

**CHANGE STRATEGIES**

- Increase and improve auditing practices
- Standardize maintenance practice across ambulatory hem/onc clinics
- Implement ongoing staff competency "check off"
- Increase staff knowledge and understanding of the relationship between biofilms and CLABSI
- Standardize discharge line care order sets
- Assess central line care practices by home health
- Educate home health nurses on CLABSI bundle
- Involve home health nurses in root cause analysis of infections
- Provide patient/caregiver with effective training on proper line care using teach-back method
- Provide effective, simple educational tools for use in the home
- Assess compliance with the maintenance bundle in the home
- Reassess line care competencies within 1-3 months of initial training and after a CLABSI
- Conduct local gap analysis to identify variation in bundle implementation
- Modify policies to incorporate evidence-based practices