PROGRAM DESCRIPTION

The Standardized Care to Improve Outcomes in Pediatric Endstage Renal Disease (SCOPE) collaborative prevents infections in pediatric peritoneal dialysis and hemodialysis patients using large-scale collaboration to identify and spread effective interventions across pediatric care settings.

Peritoneal Dialysis (PD) | Preventing infections in PD patients reduces hospitalizations and allows patients to continue home-based dialysis and maintain normal school and family activities.

Hemodialysis (HD) | Similarly, preventing infections in HD patients reduces hospitalizations and the need for additional invasive procedures. Additionally, SCOPE is contributing to new knowledge about children on dialysis while improving outcomes.

SCOPE IMPACT

- 389 episodes of peritonitis prevented
- 240 hospitalizations avoided
- Over $7.2 million saved in costs. SCOPE has demonstrated that the mean cost of hospitalizations for these patients is $30,011
- Peritonitis rate has dropped 38%; 30% reduction in hemodialysis BSI rate for original 15 HD centers
- A total of 41 sites now participate in SCOPE
- High level of scholarly output with 7 publications, more than 30 international and national presentations
- 119 physicians have received Maintenance of Certification credit as of Feb. 2017
- Nurses eligible for 64 contact hours since Oct. 2013
NATIONALLY RECOGNIZED

SCOPE is recognized as evidence-based, data driven, effective and methodologically robust by leading national organizations:

- The American Board of Pediatrics has approved SCOPE for maintenance of certification credit.
- SCOPE workshops are approved by the American Nurses Credentialing Center (ANCC) for CNE credits.
- Participation in SCOPE can be used in ANCC Magnet Recognition documentation.
- Participation in SCOPE earns points in the US News and World Report children’s hospital survey.
- SCOPE is internationally recognized as a model for performance improvement in pediatric nephrology. Alicia Neu, MD, SCOPE Faculty member, presented the SCOPE model at the International Pediatric Nephrology Association in Heidelberg, Germany in May 2017.
- SCOPE leaders participate in Nephrologists Transforming Dialysis Safety (NTDS), a collaborative effort between the CDC and the American Society of Nephrology (ASN) to reduce dialysis related infections in adults and children.
- SCOPE is providing input to the CDC’s Office of Infectious Disease on ways to increase the utilization/value of NHSN to pediatric dialysis centers, and to learn more about SCOPE’s success in infection prevention and how it might be spread to others in the dialysis community.
- SCOPE is a proud partner of the CDC’s Making Dialysis Safer for Patients Coalition.
**BENEFITS OF PARTICIPATION**

- 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 SCOPE 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**

- Your clinic can spread evidence-based SCOPE bundles to other hospital clinics for even greater impact.
- You have opportunities to present at meetings and conferences.
- Your team learns new ways to work with parents and families on infection prevention.

**SERVICES**

SCOPE 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 site performance reports
- Aggregate analysis, reporting and benchmarking
- Two face-to-face workshops/year
- Monthly webinars for data interpretation, training, and team presentations
- Training on interventions
- Team coaching from expert faculty
- 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, nurses, and QI experts
- Implementation experts
- Tools and curriculum
- Access to the SCOPE discussion group, professionally moderated and exclusively for participants
- Opportunities to share experiences and learn from peers
**PARTICIPATION FEES**

The fee for a 12-month period is $19,500. Centers can enroll to begin in January or in July; enroll by June 30 for a July start date or by December 31 for a January start date. The full 12-month participation fee is invoiced in January for centers beginning participation in January and the fee is prorated (for six months) for hospitals starting in July.

Costs of treating dialysis-related infections are estimated at $30,011, so preventing just one infection in your center pays for more than a year of participation in the Collaborative.

**HOW TO ENROLL**

Enrollment is simple; just complete the one page Enrollment Form including the signature of an authorized decision maker. Submit the completed SCOPE Enrollment Form to Cherie Thomas via email at cherie.thomas@childrenshospitals.org.

- Do NOT submit payment with your form; your hospital will be invoiced after we receive your enrollment 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, be sure to provide an appropriate Billing Contact in Accounts Payable.

**ENROLLMENT QUESTIONS?**

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

**RESULTS AND RECENT FINDINGS**

Three SCOPE research groups are preparing or have submitted the newest manuscripts:

- Impact of Insertion Practices on Infections
- Nursing Practices: Exploration of Training Bundle Elements
- Fungal Peritonitis in Infants on Dialysis

The SCOPE data set continues to expand, now containing over 17,000 follow-up forms, data on more than 1,200 PD catheter insertions, and over 1,200 training events. These data represent more than 19,700 catheter-months of data that will be analyzed and explored in 2017.
**Hemodialysis**

Data from the Centers for Disease Control and Prevention (CDC) evaluating outpatient hemodialysis (HD) in 2008 estimated 37,000 hemodialysis-associated CLABSIs, which was twice as many as occurred in intensive care units when comparing the most recent years of infections. Recent efforts in the adult ESRD population have reduced HD-related infections. However, there are few data about pediatric ESRD outpatient hemodialysis in the US. In an effort to close this gap and prevent HD-related CLABSIs in children with ESRD, the SCOPE collaborative is working on infection prevention for hemodialysis patients, drawing from the interventions and evidence developed for CLABSI prevention by our colleagues in the Hem/Onc Collaborative and PICU Collaborative from Children’s Hospital Association.

As of April 2017, data has been collected on hemodialysis patients from 26 centers, with several additional centers preparing to participate in the HD component. This extensive data set includes more than 610 enrollments (not necessarily unique patients) and data from 916 primary access or revision events. Fifteen centers submit two years of baseline (historical, pre-collaborative) data, which allows us to estimate impact in terms of infections prevented, hospitalizations prevented, and cost savings for hemodialysis patients.

Among the 15 SCOPE teams that submitted both pre/post data, there has been a 30% decrease in infection rate – from 4.0 BSI per 100 patient-months to 2.8 BSI per 100 patient-months.

![Access Related BSI Rate by Month: Pre- thru 34 Months Post](image)

**Transparency with Shared Data**

SCOPE operates on principles of data transparency within the collaborative. Participating sites agree to share their data openly within SCOPE, 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.
MANUSCRIPTS PUBLISHED

Improving Care for Children on Dialysis, Nephrologists Transforming Dialysis Safety. February 2017, Kidney News


Implementation of Standardized Follow-up Care Significantly Reduces Peritonitis in Children on Chronic Peritoneal Dialysis (SCOPE Collaborative 3-year results). April 2016, Kidney International

Design of the Standardizing Care to Improve Outcomes in Pediatric End Stage Renal Disease Collaborative. June 2014, Pediatric Nephrology

Manuscripts in preparation

Exit Site Infections (ESI) In Pediatric Peritoneal Dialysis (PD): Findings from the Standardizing Care to Improve Outcomes in Pediatric End Stage Renal Disease Collaborative (working title)

Peritonitis and Survival Following PD Catheter Insertion in Infants (working title)

Fungal Peritonitis in the Standardizing Care to Improve Outcomes in Pediatric ESRD Collaborative (working title)

2017 Presentations at 37th Annual Dialysis Conference

Risk Factors for Early Peritoneal Dialysis Catheter Use in Children

Cost of Hospitalization for Peritonitis in Pediatric Patients Receiving Chronic Peritoneal Dialysis

Adherence with 2016 ISPD Training Guidelines Among Pediatric Dialysis Patients in the SCOPE Collaborative. Awarded Best Pediatric Abstract by a Non-Physician

2016 Presentations


Home Visit Practices For Children On Chronic Peritoneal Dialysis (PD): Findings From The Standardizing Care To Improve Outcomes In Pediatric End Stage Renal Disease Collaborative (SCOPE) International Society for Peritoneal Dialysis (Australia)

Exit Site Infections In Children on Chronic Peritoneal Dialysis : Findings from the Standardizing Care To Improve Outcomes In Pediatric End Stage Renal Disease Collaborative (SCOPE) International PD Best Abstract (Australia)

Exit Site Infections (ESI) In Children on Chronic Peritoneal Dialysis (PD): Findings from the Standardizing Care To Improve Outcomes In Pediatric End Stage Renal Disease Collaborative (SCOPE) International Pediatric Nephrology Assoc. (Brazil)

Implementation of standardized practice care bundles for insertion of peritoneal dialysis catheters in children: impact on peritoneal dialysis related infections in the post-op period International Pediatric Nephrology Assoc. (Brazil)
# SBAR Tool for Talking to Decision Makers

## Situation

- We want to enroll in the SCOPE Dialysis Collaborative from Children’s Hospital Association.
- The 12 month participation fee of $19,500 is prorated through December 2017.

## Background

This collaborative works on infection prevention for peritoneal dialysis and hemodialysis patients.

- **Large scale**: 41 hospitals currently participate and new hospitals continue to enroll.
- **Two programs, two patient populations**: peritoneal dialysis and hemodialysis.
- **Our role**: We implement an evidence-based catheter insertion bundle, a catheter maintenance training bundle for family care givers, and a training follow-up bundle for PD. We implement a catheter maintenance bundle for HD. We submit monthly data on rates, process compliance, and infections.
- **Data services**: We get a monthly report on our center’s performance; the performance of the collaborative in aggregate; and the performance reports of all other participating centers. We use the NAPRTCS portal for data collection and reporting, so we avoid duplicate data entry and staff training overhead.
- **Training services**: Training includes coaching; monthly webinars; workshops twice a year; and an online community and resource library.
- **MOC and CNE**: The collaborative is approved by the American Board of Pediatrics (ABP) for maintenance of certification (MOC). Workshops are American Nurses Credentialing Center (ANCC)-approved for CNE credits.
- **MAGNET**: Participation in SCOPE can be used in ANCC Magnet Recognition documentation.
- **US News and World Report Survey**: Participation in SCOPE earns points in the USNWR hospital survey.
- **CDC Making Dialysis Safer for Patients Coalition**: SCOPE is a proud partner of the CDC’s Making Dialysis Safer for Patients Coalition
- **Sponsored by**: SCOPE 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.

## Assessment

- **Effective**: SCOPE centers have achieved statistically significant improvement in care practice compliance and a 38% reduction in annualized peritonitis rates and a 25% reduction in annualized exit site infection rates in the last year.
- **Patient outcomes improve**: Our dialysis center can reduce dialysis infection rates. Preventing these infections prevents hospitalizations, maintains normal school and family activities, and for PD patients, continues home-based dialysis.
- **Cost savings impact**: SCOPE has estimated average costs of care for peritonitis and exit-site infections at $30,011 in the PD patient population. Average cost data is used to estimate the cost savings achieved by SCOPE teams based on infections prevented. To date, teams have saved an estimated $7.2 million.
- **New Interventions**: SCOPE teams are creating new knowledge about how to be more effective at training patients and care givers, testing strategies for engaging families in the quality improvement process, standardizing care giver training, and assessing health literacy of care givers.
- **Family/patient engagement**: Patient and family engagement is a core strategy for SCOPE. What we learn from SCOPE we can extend to other patient populations.
- **New knowledge**: SCOPE data is being used to understand more about peritonitis and exit-site infections; in 2016-17, participating team members presented SCOPE nine times at professional conferences, including at the International Pediatric Nephrology Association and the International Society of Peritoneal Dialysis. Research Group teams are working on three manuscripts for publication, expected to be submitted this year.
- **We leverage participation**: Connecting with teams at other hospitals reduces trial and error to find effective solutions; enables us to learn new skills and techniques that extend beyond dialysis-related infections (hand hygiene, patient self-management).

## Recommendations

- We recommend that we participate in the SCOPE Collaborative for 2017.