



THE CHAIR'S INITIATIVES OF THE DEPARTMENT OF PEDIATRICS

IMPACT

ROUND **4** 2013-2015



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THE CHAIR'S INITIATIVES: **IMPACT**

ROUND **4** 2013-2015

Now in its 10th year, the Chair's Initiatives of the Department of Pediatrics is an internal grant program at The Children's Hospital of Philadelphia. It provides funds to multidisciplinary teams who have ideas for improving care.

The program has gained a reputation as an incubator for high-impact projects: The 27 teams funded since 2006 have published close to 100 articles and chapters and received more than \$8.2 million in additional grants. The initiatives have a profound effect upon children and families, improving care and improving lives.

This booklet details the Round 4 initiatives (pages 4-13) and provides a summary of past and future projects (pages 14-15).

THROMBOSIS PREVENTION AND TREATMENT

Preventing blood clots in cardiac patients *Page 2*

RESPONDING EFFECTIVELY TO BULLYING AND VICTIMIZATION

Tools for pediatric practices to prevent bullying *Page 4*

A COMPUTER-ASSISTED ACNE MANAGEMENT SYSTEM

A smartphone app to improve acne care *Page 6*

TEXT MESSAGES TO INFORM, MOTIVATE AND ENGAGE ONCOLOGY PATIENTS

Helping adolescents stay engaged and adjust after cancer treatment *Page 8*

GUIDELINES FOR CHRONIC GLUCOCORTICOID USE IN CHILDREN

Toward more careful use of steroids for pediatric patients *Page 10*

On the cover: Bria, 13, shown with her dad, Donovan, received encouraging messages as part of a Chair's Initiative that tested texting as a tool to improve follow-up care for cancer patients.

LEADERS

of the Chair's Initiatives



Joseph W. St. Geme III, M.D.

Physician-in-Chief



Alison Marx

*Operating Officer
Department of Pediatrics*



Kathy N. Shaw, M.D., M.S.C.E.

*Associate Chair, Quality and Safety
Department of Pediatrics*

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SAFER CARDIAC CARE

THROMBOSIS PREVENTION AND TREATMENT

For a variety of reasons, pediatric cardiac patients are at risk for dangerous blood clots (thrombosis). Heart defects that prevent normal pumping of blood, surgeries, use of long-term IV lines, and other factors place them at risk. Building on the work of a previous Chair's Initiative, called the Anticoagulant Management Program, this team created guidelines and better care practices to prevent thrombosis and improve anticoagulant (blood-thinner) management for cardiac patients.

The team:

- Instituted weekly Cardiac Thrombosis Rounds, in which providers visit patients on thrombosis treatment and discuss each case
- Hired a nurse practitioner who specializes in thrombosis management
- Created a database to track cardiac patients under thrombosis or anticoagulant management
- Developed a care guideline called a “clinical pathway” for patients at risk for catheter-related thrombosis
- Started a consult service, in which doctors at CHOP can request help from a team of experts in planning treatment for at-risk patients
- Started a clinical trial of an anticoagulant called edoxaban in pediatric patients
- Began creating teaching tools for when at-risk patients are discharged

Impact on Vanessa

Vanessa, at right with her mom, Delia, became very sick with a rare heart condition when she was 13. Her heart was so damaged that a transplant was necessary. Vanessa is one of the patients who has benefited from improved thrombosis prevention and anticoagulant management.





Project Goal

Year 1 Accomplishments

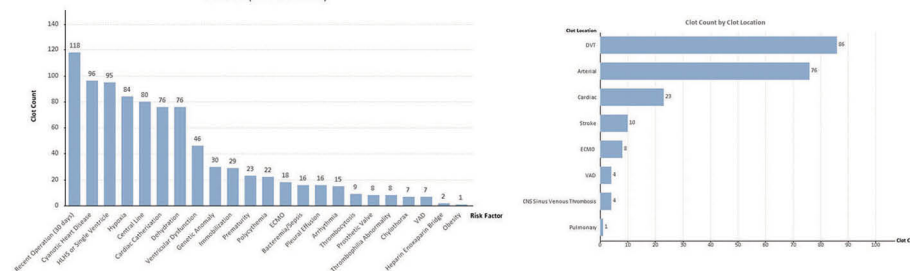
Year 2 Accomplishments

- 2-5 new and 6-8 f/u patients are seen each week
- Service recognized in Epic so consults can be ordered appropriately and tracked
- Working with billing to ensure notes are compliant and billed for the appropriate LOS
- Working on Epic templates for initial consult/follow-up notes (currently using .dot phrase)

- QlikView Application is live- can follow rate of thrombosis in cardiac center over time
- Initial data analysis resulted in the submission of 3 abstracts to the American Heart Association on thrombosis risk factors, thrombosis rate in the cardiac center and report of 1 year experience with the clinical pathway on Management of Acute Catheter-related Venous Thromboembolism (80% complete clot resolution). Development of a predictive model for VTE in cardiac patients is underway.

4. Established Guidelines for Bridging Therapy in patients whose warfarin is interrupted

Data



Next Steps

We look forward to continuing all elements of the Chair's Initiative with divisional funds augmented by funds generated by the consult service. We hope to develop and validate a risk assessment model for venous thromboembolism in cardiac inpatients. Ultimately this model may help stratify patients most likely to benefit from thrombosis prophylaxis. In addition, we hope to grow our outpatient service with the aid of Clinical PharmDs with expertise in anticoagulation and thrombosis therapy.

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TOOLS TO PREVENT BULLYING

RESPONDING EFFECTIVELY TO BULLYING AND VICTIMIZATION

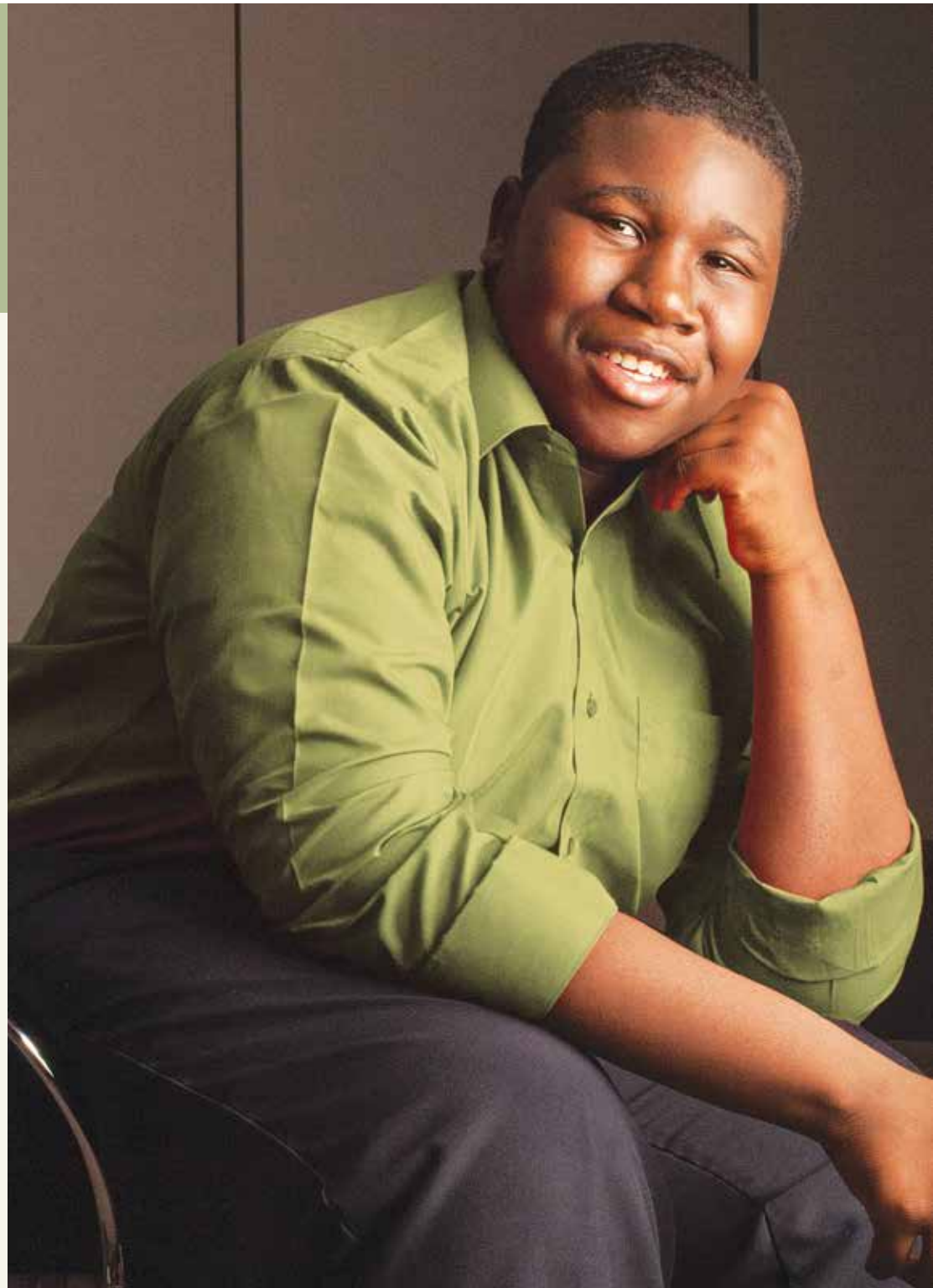
Bullying harms the health and well-being of millions of children and adolescents. Pediatricians and other healthcare providers can intervene by recognizing signs of bullying and helping patients and parents react in a constructive way. Many providers, while confident about recognizing when a child may be experiencing bullying, are unsure of how to talk about it and help. A team of CHOP psychologists, pediatricians and other healthcare professionals decided to create tools to help pediatric practices better help the victims of bullying.

The team:

- Surveyed 180 pediatricians and other providers about their knowledge of the effects of bullying and how to help
- Created a screening tool to assess whether a child is being bullied and, if so, what the effects are; the tool is now in use by many CHOP practices, and more than 60,000 patients have been screened
- Created youth advisory groups to ensure tools and materials included input from kids
- Created handouts for parents and kids with general tips, as well as information about cyber bullying and weight-related bullying

Impact on Kids Who Are Being Bullied

The Healthy Weight Program at CHOP is for children and teens struggling with their weight. Screening tools provided by this Chair's Initiative have shown that nearly 17 percent of Healthy Weight patients are bullied. The screening questions have allowed psychologists, doctors and nurses to improve their approach: A discussion about bullying now happens for every patient, and providers feel more comfortable bringing up the topic. The bullying handouts provide families a useful takeaway: For example, one family took a handout to their daughter's guidance counselor to help get assistance from her school.





Enhancing Providers' Ability to Respond Effectively to Peer Bullying and Victimization

Department of Pediatrics Chair's Initiative

Stephen Leff, Ph.D; Alexander Fiks, MD, MSCE; Anthony Luberti, MD; Joel Fein, MD, MPH; Thomas Power, Ph.D. Nathan Blum, MD; Zachary McClain, MD; Amy Kratchman, BA; Symme Trachtenberg, MSW, LSW; Meghan Marsac, Ph.D; Patricia DeRusso, MD; Karen Wohlheiter, Ph.D; James Massey, RN, BSN, MBA; Tracy Waasdorp, Ph.D; Wanda Moore, MSS, MLSP

Project Goal

Improve care to patients and families impacted by peer bullying and victimization through the dissemination of evidence-based knowledge, strategies, and resources to a diverse group of CHOP health care providers.

Accomplishments

- Designed and implemented a provider survey to assess provider experience with bullying.
- Developed youth advisory groups to participate in focus groups and advise our team.
- Developed handouts and referral information for providers available via the intranet & Epic.
- Collaborated with 4 partner departments (primary care network, healthy weight, adolescent medicine, & developmental & behavioral pediatrics) to create screening tools with bullying-related questions; and incorporate tools into individualized workflows.
- Monitored department patient/provider encounters during the past 6 months.

Survey of Providers

- Designed a 45 item survey to assess provider knowledge and experiences with bullying.
- Overall survey response rate of 73% (n = 182 providers)
- Highest levels: asking about bullying and recognizing bullying as cause of stress
- Lowest levels: Knowledge of CHOP & Community referrals and addressing Cyber-Bullying

Screening Questions & Handouts

Do you feel that you 1) are being bullied or 2) have bullied others?

- In what ways are you being bullied or have bullied?
- Are you bullying/being bullied for any of the following reasons?
- How long has this been going on?
- How is this impacting you?

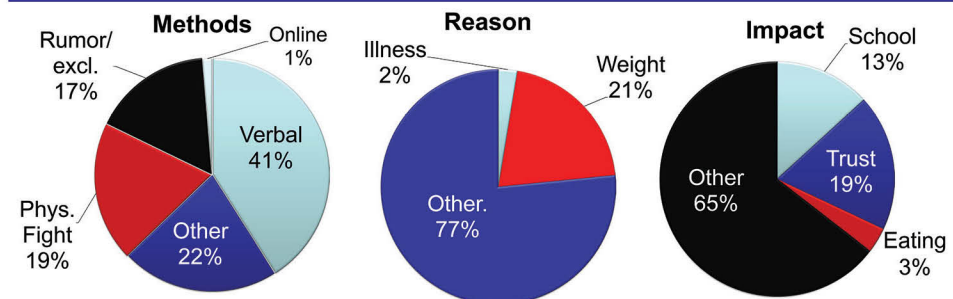


- **What is bullying?** (What it is & is not)
- **Youth handout** (Tips for youth)
- **Parent handout** (Tips for parents)
- **Social Bullying** (Topic information)
- **Cyber Bullying** (Topic Information)
- **Weight & Bullying** (Tips for youth)

Utilization Monitoring

- 98,945 patients screened from 7-20 years old; 100% responded to screening questions
- Overall 2556 Victims (2.6%) and 755 Bullies (.8%); 12.1% Victims/Bullies given handouts
- Victims by age: 7-10 years 53 %; 11-14 years 37%; 15- 20 years 10%
- Bullies by age: 7-10 years 47.3%; 11-14 years 38.6%; 15- 20 years 14.1%
- Victims by Gender: Male 50%, Female: 50%; Bullies by Gender: Female: 55% Male: 45%
- Primary Care (2.4% Victims, 0.7% Bullies); Adolescent Med (3.1% Victims, 0.2% Bullies)
- Healthy Weight (11.7% Victims, 3.0% Bullies); Dev. Peds (16.3% Victims, 5.1% Bullies)

Sample Findings for Victims



Provider Utilization Feedback

- Describing behaviors may be more useful than using "Bullying" terminology
- "Other" category used often due to reasons & impact that are not medical or relational
- Handout usage may be underestimated due to multi-encounters with more than 1 provider
- Providing handouts in other languages especially Spanish would be helpful
- Responses differ from patients depending upon whether parents are present or not
- Most bullying is school related and follow-up at that level is important

Next Steps

- Provider training on bullying terminology; incorporate definition into screening
- Consider expanding reasons and impact categories within department templates
- Translate handouts into Spanish
- Disseminate findings & submit for publication

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SMARTPHONE APPS TO IMPROVE CARE

A COMPUTER-ASSISTED ACNE MANAGEMENT SYSTEM

Evaluating acne in adolescents is one of the most common tasks of primary care pediatricians. Their assessments of acne severity and their decisions on treatment and whether to refer to a dermatologist vary widely. A dermatologist and computer specialists from CHOP decided to create an app to help standardize and improve care.

The team:

- Reviewed medical records and surveyed pediatricians to assess treatment paths for acne and develop a clinical decision tree
- Gathered photos of acne-affected skin and created “computer vision” algorithms so a photo taken by a pediatrician can be used in generating treatment recommendations
- Began securing server and security infrastructure to support needs such as database collection and interface with pediatricians
- Will soon pilot the app at a CHOP primary care practice
- Will collect and analyze data to assess whether doctors using the app are prescribing treatment based on the app’s recommendations

Impact on Pediatricians and Patients

Acne is one of the most common skin conditions in children and teenagers. This app may lead to better treatment decisions from primary care pediatricians.





COMEDO (Computer-Optimized Management and Evaluation of Disease Outcomes): A Computer-Assisted Acne Management System

Albert C. Yan, MD, Elena Bernardis, PhD, Jianbo Shi, PhD
on Behalf of the Chair's Initiatives Team, Department of Pediatrics

Project Goal

Develop a computer-based system to perform a patient acne assessment (history intake and visual inspection) and provide appropriate treatment recommendations, thereby providing pediatricians a resource to help facilitate:

1) standardizing an approach to acne evaluation and treatment, 2) adherence to expert guidelines, and 3) improving clinical efficiency in the practice setting.

Accomplishments

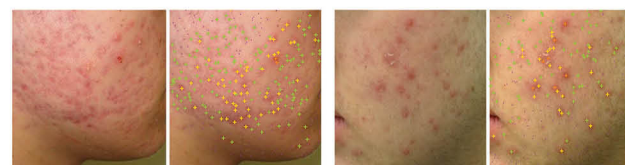
Overview

- Year 1
 - Development of clinical assessment algorithms
 - Adaptation of acne treatment algorithms
 - Development of computer vision algorithms
- Year 2
 - Development of application software
 - Creation of machine learning algorithms
 - At the end of two years, pilot at primary care practices

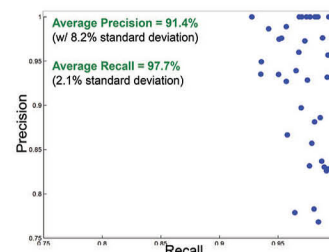
Milestones/Progress

- Q1
 - ✓ Design/implement clinical input survey for patient/clinician
 - ✓ Create acne image database from CHOP dermatology patients
 - ✓ Refine computer vision algorithms on larger patient datasets
 - ✓ Compile image acquisition rules for app input
- Q2
 - ✓ Design/implement basic clinical decision tree for acne management
 - ✓ Define statistical analysis for concordance testing
 - ✓ Label lesion ground-truth data for software evaluation
 - ✓ Streamline documenting clinical formulary
- Q3
 - ✓ Define architecture of server application (e.g. server infrastructure setup, software framework, database table design, data security, usage scenarios)
 - ✓ Implement server software (e.g. database, web service interface)
 - ✓ Implement iOS app interface
 - ✓ Complete standalone COMEDO v.0 basic app to take input survey and output standard treatment recommendations
- Q4
 - ✓ Setup server at CHOP for client-server app interface
 - ✓ Collect expert labeled acne severity scores
 - ✓ Explore machine learning algorithms for severity assessment
 - ✓ Analyze data from research protocol to test/refine system

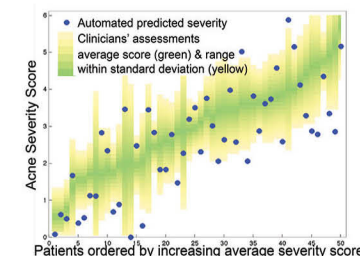
Performance Measures



Lesion extraction and classification. The current algorithm has sensitivity in lesion identification and can roughly differentiate lesion subtypes. Gathering local image structure information around the lesions' centers allows to further separate lesions' severity (green to orange colors indicate increase in inflammation).



Automated lesion extraction results on a dataset of 50 images. Both precision (# of extracted lesions equal to true lesions) and recall (# of true lesions that are correctly extracted) average above 90%.



Automated severity assessment. Using the information from the lesion extraction, our overall severity scores (blue) fall within the standard deviation of the clinicians' scores (green-yellow) over 68% of the time.

Next Steps

- * Refine machine learning algorithms for automated severity detection
- * Continue collection of expert labeled ground-truth data
- * Pilot COMEDO v.0 at CHOP clinical practices
- * Start analyzing text data for modeling correlations between input patient information and output medication plans

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TEXTING FOR BETTER CANCER CARE

TEXT MESSAGES TO INFORM, MOTIVATE AND ENGAGE ONCOLOGY PATIENTS

Texting is a great way to communicate with children and teenagers, but healthcare providers are struggling with the best ways to use texting. Privacy laws and technological considerations make decisions about texting with patients complex. A team of CHOP psychologists, physicians and computer specialists decided to create and test a text message system to help adolescent and young adult cancer patients adhere to treatment plans and to encourage healthy habits.

The team:

- Surveyed approximately 1,600 patients, parents, providers, and researchers about interest in and barriers to texting
- Enrolled 61 oncology patients in the study; some received daily texts for 16 weeks while others (the control group) were given a printed handbook
- Completed a survey of participants showing that behaviors such as use of sunscreen and improved exercise and diet were more likely among those who received texts
- Received a grant from an external organization to develop a more advanced system, which will feature more tailored messages

Impact on Bria

As a 9-year-old, Bria was diagnosed with a rare form of leukemia. She is now a thriving seventh-grader who is on the drill team, enjoys art and is an excellent student. Bria is one of the patients who benefited from receiving encouraging text messages from her oncology team at CHOP. She is shown at right with the study leader, Lisa Schwartz, Ph.D.





Development and Evaluation of THRIVE (Texting, Health Resources to Inform, Motivate and Engage)

Lisa A. Schwartz, PhD^{1,2}, Lamia P. Barakat, PhD^{1,2}, Lauren Daniel, PhD¹, Eliana Butler, BA¹, Nadia Dowshen, MD¹, Dava Szalda, MD¹, Wendy L. Hobbie, CRNP¹, Leslie Kersun, MD^{1,2}, Lisa Pierce, BS^{1,2}, Yimei Li, PhD^{1,2} Christopher Bonafide, MD, MSCE^{1,2}

¹The Children's Hospital of Philadelphia; ²University of Pennsylvania

Project Goals

- 1) Develop technical infrastructure needed to implement and support text messaging interventions for research programs and clinical initiatives across Pediatrics at CHOP in an innovative, scalable, reproducible way.
- 2) Demonstrate efficacy of infrastructure in a proof-of-concept randomized clinical trial of THRIVE (Texting Health Resources to Inform, Motivate, and Engage)—a tailored text messaging intervention to improve knowledge, health promotion, and well-being of adolescents/young adults (AYA) completing treatment for cancer.

Accomplishments 1 & 2: Gauge practices and interest in mHealth

- 1) Developed a mHealth Working Group to facilitate and promote research, quality improvement, and clinical use of mHealth interventions and infrastructure throughout CHOP.
- 2) Distributed 3 surveys CHOP-wide.

Survey 1 & 2: Provider, parent, and AYA patient practices and interest related to texting as a form of patient/parent-provider communication.

N = 1126 providers, N = 363 parents, N = 52 patients

Endorsement of patient/parent-provider texting

- Parent = 10%
- Patient = 10%
- Provider = 15%

Belief that it might or would definitely enhance child's health

- Parent = 93%
- Patient = 87%
- Provider = 68%

Primary reasons for texting

Primary reasons for texting	> 60% endorsed
Patients text providers	Saves time
Parents text providers	Saves time
Providers text patients	Only way to reach
Providers text parents	Saves time, mutually preferred, no cell minutes, don't use email

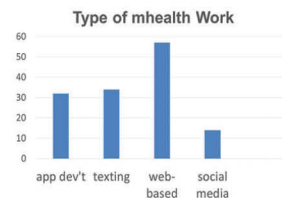
Almost 50% of providers desired:

- A program/technology to support two-way texting
- Training/guidelines in texting ethics and confidentiality
- Way to save texts in epic

Survey 3: Clinical researchers' engagement with mHealth research and related barriers and resources needed.

N = 173 clinical researchers or QI project leaders so far....

- ❖ 35% conducting mHealth research/QI
- ❖ 41% said interested in learning more



Barriers (n = 25)	%	Resources Needed (n = 28)	%
Getting funding	53	A mHealth "core" or "center"	84
Lack of technical infrastructure/resources	58	In house app developer	79
ID external vendors	33	In house web developer	63
Lack of expertise at CHOP	44	Specialized/expanded IS support	69
ID academic collaborators	23	Education to IRB/risk management	53
IRB/Regulatory issues	23	Someone to help vet potential vendors	57
Legal/contractual issues	33	Contracts with vendors in place	52
Other	7		

Accomplishments 3 & 4: Develop and test THRIVE

- 3) Created developmentally sensitive, tailored, and theoretically informed text messages intended to increase knowledge, motivation, and engagement for AYA completing cancer treatment.

Component	Content	Sample text message
INFORM	Health promotion, acute problems, long term effects, resources	Talk to your oncology provider if you want to weight lift. Light weights and high reps are better for survivors b/c of risk of heart damage from treatment.
MOTIVATE	Goals: encouragement, reinforcement, monitoring	Make a schedule! —Try to plan out a time in your day to exercise. Setting aside a specific time of the day will help prevent you from putting it off until "later".
ENGAGE	Promote follow-up care, psychosocial support	Sometimes people feel nervous or anxious about going back to the doctor after treatment. Text back "1" to learn about how to cope with this anxiety.

- ❖ 210 texts spanning THRIVE components: Inform, Motivate, Engage.
- ❖ 23% of text messages are tailored to participant characteristics of age, chosen goal and appointment and medication reminders.
- ❖ 41% interactive: prompt to request more information or survey items.
- ❖ Reify Health—a cloud-based platform allowing study team members to send, receive, and track tailored text messages to study.
- ❖ Phones: CHOP phones, service, and maintenance.

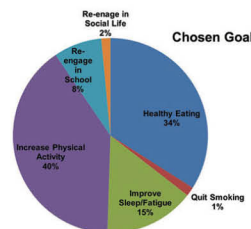
- 4) Via a pilot randomized controlled trial (RCT), tested a tailored text messaging intervention to improve knowledge, health promotion, and well-being of AYA completing treatment for cancer. Results to date support the acceptability, feasibility, and efficacy of THRIVE, and using texting as intervention mode.

Sample:

- 61 AYA within 1 year of completing cancer treatment
- 54 completed
- M_{age}=17.21 (2.97)
- 55.7% female; 32.8% minority

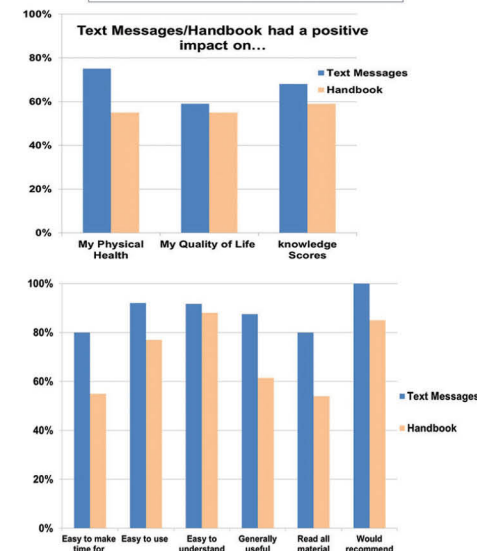
Methods:

- Randomized to receive daily texts for 16 weeks or to receive AYA survivor handbook.
- Choose goal to work on.
- Pre and post measures.



Health Behaviors:

- 1 person in texting group stopped smoking. (No smokers in handbook group).
- At Time 2, texting group had more AYA who:
 - Improved fruit/veggie intake
 - Improve whole grain intake
 - Started regular exercise
 - Used sunscreen



Accomplishment 5: Secure funding for THRIVE 2.0

- 5) Received new grant (St. Baldrick's) to develop THRIVE 2.0, which will be an app-based tailored mHealth intervention developed by enhancing/modifying an existing disease management app platform from Life Science Technologies. A Center for Disease Control grant to adapt THRIVE to enhance uptake of survivorship care plans among AYA survivors was also funded.

Next Steps

- ❖ Disseminate final results.
- ❖ Develop THRIVE 2.0 to be app-based with more tailored messages.
- ❖ Continue mHealth working group to advocate for and facilitate more mHealth work.

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SAFER USE OF STEROIDS

GUIDELINES FOR CHRONIC GLUCOCORTICOID USE IN CHILDREN

Glucocorticoids, also known as steroids, can control pain and inflammation from lupus, inflammatory bowel disease, cancers, and other conditions in children. Though side effects of extended use can be harmful, data on how physicians aim to prevent these side effects are lacking. In addition, weaning children from the medication must be done carefully, because if doses are decreased or stopped too quickly, a life-threatening condition called adrenal insufficiency can result. A team of CHOP rheumatologists, endocrinologists, nephrologists and other experts decided to compile data and create guidelines for the safer use of steroids in children.

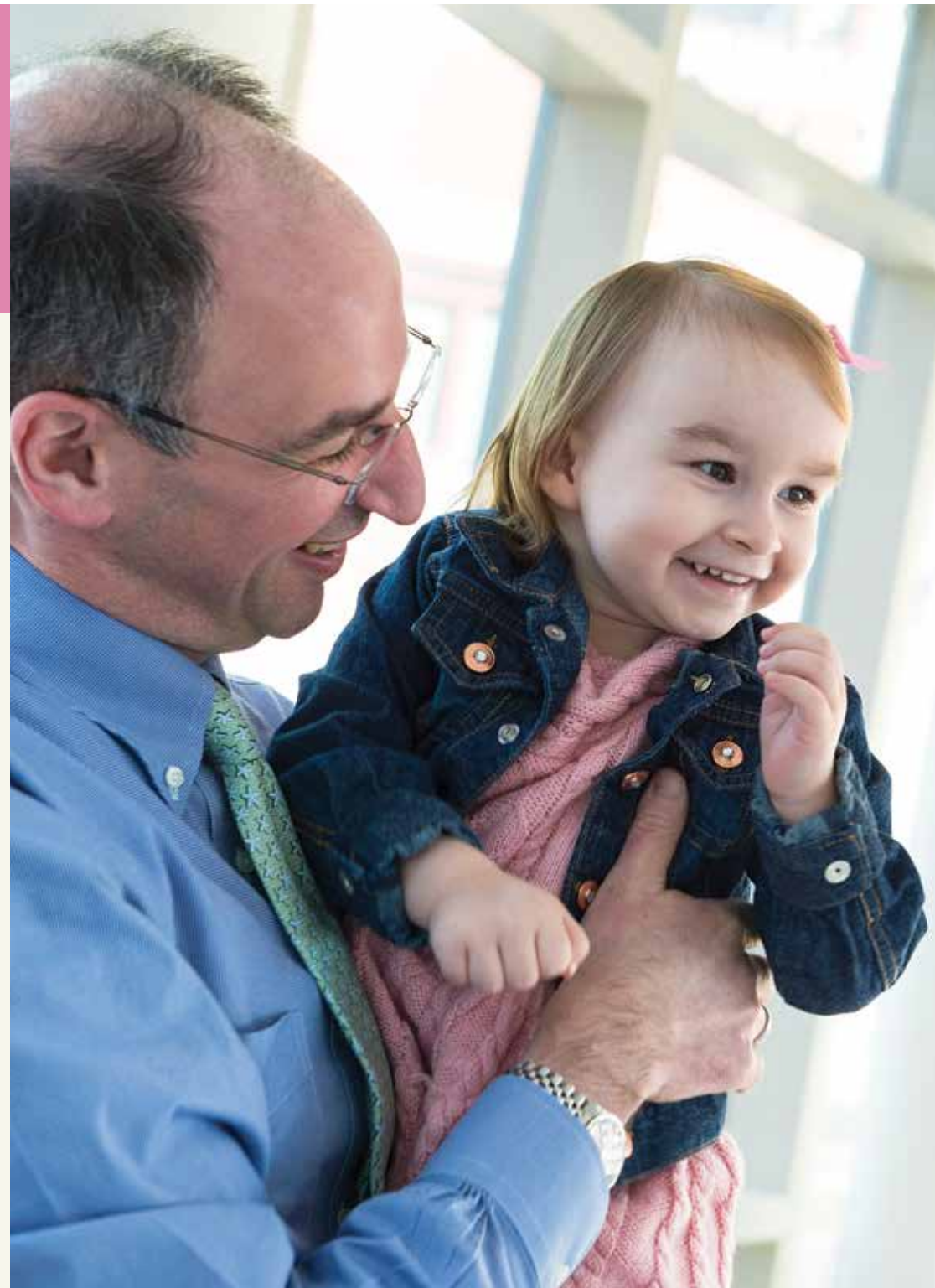
The team:

- Conducted surveys of more than 120 attending and resident physicians and identified key areas of concern: preventing adrenal insufficiency during steroid withdrawal and correctly formulating the “stress” doses used when patients become ill and need extra medicine
- Developed a novel method to alert clinicians at the point of care that a patient may be at risk for life-threatening adrenal insufficiency and provide care guidelines
- Created a care guideline called a “pathway” for weaning and stress dosing

- Reviewed more than a thousand medical charts to understand current methods that clinicians use to prevent and monitor steroid-related adverse events and guide future improvement activities

Impact on Faith

Faith, 2, shown at right with project leader Sandy Burnham, M.D., M.S.C.E., was diagnosed as an infant with polyarteritis nodosa, an inflammatory vascular disease that is very rare in children. Faith was one of the first patients to benefit from this initiative. She was safely weaned off maintenance doses of corticosteroids. The “stress” dose her mother keeps in the refrigerator for when Faith becomes ill is based upon the new guidelines.



Identification, Remediation, and Prevention of Chronic Glucocorticoid Adverse Events

Sandy Burnham MD MSCE, Bob Grundmeier MD, Andrew Palladino MD, Katherine Lord MD, Michelle Denburg MD MSCE, Kevin Meyers MBBCh, Petar Mamula MD, Anne Reilly MD MPH, Amy Waldman MD, Brenda Banwell MD, Theo Zaoutis MD MSCE, David Munson MD, April Taylor, MS MHA, Lauren Tanzer, MS PMP

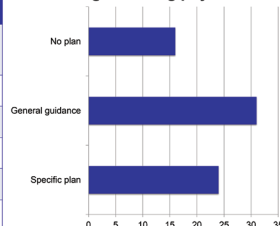
Accomplishment 1: Performed Clinician Needs Assessment and Identified Adrenal Insufficiency as a Key Area of Concern

- Survey of attending physicians (n=84) and residents (n=42)
- Adrenal insufficiency and stress-dose steroid use was the most pressing area to target

Clinically significant adrenal insufficiency observations among attending physician steroid prescribers

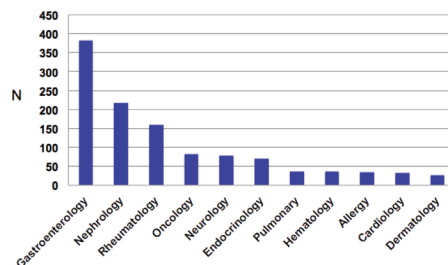
Frequency of observation	% (n = 70)
Never	20
Up to 5%	47
6-10%	11
11-25%	16
25-50%	6

Stress-dose steroid plan strategy among attending physicians



Accomplishment 2: Developed Method to Identify Individuals Receiving Chronic Glucocorticoid (GC) therapy

- Identified over 1200 individuals with new chronic GC prescriptions between 1/1/2011 and 12/31/2012
- In depth manual chart review revealed that EPIC algorithm had 93% sensitivity and 87% specificity
- Provided foundation for Epic chronic glucocorticoid registry that will be used to drive quality improvement (QI) efforts



Accomplishment 3: Performed Retrospective Analysis and Identified Gaps in Preventive Interventions

- Manuscript submitted characterizing extent of and variation in use of preventive care in patients in Gastroenterology, Nephrology, and Rheumatology on glucocorticoid therapy
- Benchmarking of current practices critical to future quality improvement efforts

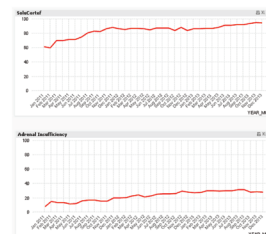
Use of Preventive Care with Chronic Glucocorticoid Exposure (n = 759)

Preventive measure	GI (n, %)	Nephrology (n, %)	Rheumatology (n, %)	p
25(OH)D	309 (81)	136 (62)	97 (61)	< 0.001
DXA	153 (40)	8 (4)	5 (6)	< 0.001
Lipid screening	44 (12)	106 (49)	68 (43)	< 0.001
PPV-23	11 (3)	107 (49)	15 (9)	< 0.001
Hydrocortisone	10 (3)	2 (1)	4 (3)	0.35

Created a QlikView Application for Future QI Efforts

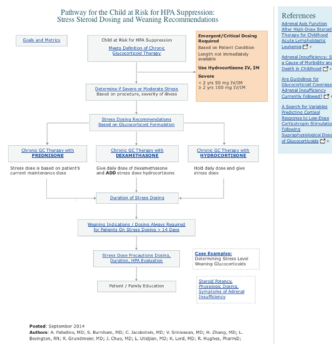
- Designed application using retrospective data
- Developed metrics in cardiovascular and nutrition, bone health, vaccination, and stress dose steroid domains
- Will convert to a prospective tool populated with patients in the Epic chronic glucocorticoid registry

Intramuscular hydrocortisone prescriptions and problem list documentation of adrenal insufficiency in the Division of Endocrinology



Stress Dose Steroid Pathway Development and Implementation

- Multidisciplinary collaboration to create the Stress Dose Steroid and Steroid Weaning Clinical Pathway
- Greater than 10,000 views over the last 12 months
- Will use Epic chronic glucocorticoid registry to drive clinical decision support for pathway implementation
- Inpatient Implementation
 - Focus on clinical decision support using Epic registry
 - Key metric will be time to administration of stress dose steroid
- Outpatient Implementation (Rheumatology Pilot)
 - No standardized planning or prescribing before pathway was created
 - Implemented standardized stress dose planning process (documentation, prescribing, educational materials) consistently performed in 96% of patient encounters
 - Manuscript in preparation
 - Plan is spreading to other Divisions



Group	Representative
OCQI	Aileen Schast Jane Lavelle Liz Moxey
Endocrinology	Andrew Palladino
Rheumatology	Sandy Burnham
ED	Cynthia Jacobstein
Gen Peds/Epic	Levon Utidjian Bob Grundmeier
Neonatology	Huayan Zhang John Chuo
PICU	Vijay Srinivasan
Nursing	Linda Bevington
Pharmacy	Rachel Hughes

ROUND 4 Publications, Presentations and Grants

Identification, Remediation, and Prevention of Chronic Glucocorticoid Adverse Events

Presentations

Burnham, JM. **Identification, Remediation and Prevention of Chronic Glucocorticoid Therapy Adverse Effects**, CHOP Bone Health Conference, May 2014.

Burnham, JM. **Stress Dose Steroids in Children Receiving Chronic Glucocorticoid Therapy**, CHOP Division of Rheumatology Clinical Conference, Sept. 2015.

Burnham, JM. **Stress Dose Steroids in Children Receiving Chronic Glucocorticoid Therapy**, CHOP Department of Pediatrics Patient Safety Conference, Oct. 2015.

Burnham, JM. **Stress Dose Steroids in Children Receiving Chronic Glucocorticoid Therapy**, CHOP Division of Nephrology Clinical Conference, March 2015.

Burnham, JM. **Stress Dose Steroids in Children Receiving Chronic Glucocorticoid Therapy**, CHOP Division of Gastroenterology Clinical Conference, March 2015.

Basiaga M, Burnham J, Burrows E, Grundmeier R. **Screening Practices in Pediatric Patients Treated with Chronic Glucocorticoid Therapy**, CHOP Research Day, Feb. 2014.

Burrows E, Burnham J, Grundmeier R. **Determining Treatment Duration from Free-text Glucocorticoid Prescriptions**, Annual Mid-Atlantic Bioinformatics Symposium, Philadelphia, April 2014.

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Palladino A, Burnham JM, Jacobstein C, Srinivasan V, Zhang H, Bevinton L, Grundmeier R, Chuo J, Utijian L, Lord K, Hughes R. **Pathway for the Child at Risk for HPA Suppression: Steroid Stress Dosing and Weaning Recommendations**. <http://www.chop.edu/clinical-pathway/glucocorticoid-tapering-and-stress-dose-clinical-pathway>.

Basiaga ML, Burrows EK, Denburg MR, Meyers KE, Grossman AB, Mamula P, Grundmeier RW. **Preventive Care in Children Receiving Chronic Glucocorticoid Therapy at a Tertiary Care Center**. Submitted for publication.

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Enhancing Providers' Ability to Respond Effectively to Peer Bullying and Victimization

Presentations

Leff SS, **The Road to Research, Bullying Prevention and Beyond...**, invited lecture, Maternal and Child Health Bureau Annual Meeting of Leadership Education in Developmental-Behavioral Pediatric Training Programs, Philadelphia, March 2015.

Leff SS, **Future Directions in Bullying and Violence Prevention**, invited lecture, Society for Prevention Research, Washington, DC, May 2015.

Leff SS, Moore W, Bevans K, Waasdrop TE, Winston F, **Bridging the Gap Between Theory, Innovation and Practice in Bullying Prevention Programming**, paper presentation, Society for Prevention Research, Washington, DC, May 2015.

Moore W, Leff SS, **Disseminating Evidence-based Strategies for Bullying Prevention**, workshop, National Association of School Psychologists Annual Conference, Feb. 2015.

Paskewich B, Leff SS, **Validating an Aggression Prevention Program for Relationally Aggressive Urban Girls**, paper presentation, National Association of School Psychologists Annual Convention, Orlando, FL, Feb. 2015.

Publications

Leff SS, Waanders C, Waasdrop TE, Paskewich B. **Bullying and Aggression in School Settings. Handbook of Evidence-based Practices for Emotional and Behavioral Disorders: Applications in Schools.** Hill M. Walker and Frank M. Gresham (eds.). Guilford, pages 277-291, 2014.

Marsac MM, Kassam-Adams N, Hildenbrand AK, Nicholls E, Winston FK, Less SS, Fein J. **Implementing a Trauma-informed Approach in Pediatric Healthcare Networks.** *JAMA Pediatrics.* In press.

Waasdrop TE, Horowitz-Johnson Z, Leff SS. **Cyberbullying Across the Lifespan: Risk Factors and Consequences. Handbook of Bullying Prevention: A Lifecourse Perspective.** C.P. Bradshaw (eds.) National Association of Social Workers Press. In press.

Waasdrop TE, Monopoli J, Centeno D, Leff SS. **Anger and Aggression Prevention Among Peers. The Handbook of Applied Interventions for Children and Adolescents.** L Theodore (eds.). Springer Publishing Co. In press.

Thrombosis Prevention and Treatment in Cardiac Patients

Presentations

Giglia TM, Petrosa WL, Veneziale K, Murphy K, Pappas J, Luan X, Raffini L, **Rate of Hospital Acquired Thrombotic Events in Pediatric Cardiac Patients**, poster presentation, American College of Cardiology Scientific Sessions, April 2016.

Giglia TM, Petrosa WL, Veneziale K, Murphy K, Pappas J, Luan X, Raffini L, **Use of PC4 Database in a Prospective Cohort Study of Hospital-acquired Thrombosis in Pediatric Cardiac In-patients**, poster presentation, American College of Cardiology Scientific Sessions, April 2016.

Giglia TM, Petrosa WL, Veneziale K, Murphy K, Pappas J, Luan X, Raffini L, **Development of a Clinical Practice Pathway for the Management of Acute Catheter-Related Venous Thromboembolism in Pediatric Cardiology Patients: Year One Evaluation**, poster presentation, American College of Cardiology Scientific Sessions, April 2016.

Text Messaging Interventions

Presentations

Schwartz LA, Barakat LP, Daniel LC, Dowshen N, Butler E, Hobbie WL, Kersun L, Wasik M, Pierce L, Szalda D, Brumley LD, Li Y, Bonafide C. **Department of Pediatrics Chair's Initiative: Proof of Concept of an Infrastructure for Text Messaging Interventions at CHOP**, poster presentation, Patient Quality and Safety Day, CHOP, March 2014.

Schwartz LA, Barakat LP, Daniel LC, Dowshen N, Butler E, Hobbie W L, Kersun L, Wasik M, Pierce L, Szalda D, Brumley LD, Li Y, Bonafide C. **Department of Pediatrics Chair's Initiative: Proof of Concept of an Infrastructure for Text Messaging Interventions at CHOP**, poster presentation, Leadership Education in Neurodevelopmental Disabilities Fellowship Poster Day, CHOP, May 2014.

Schwartz LA, Daniel LC, Butler ES, Bonafide C, Dowshen N, Hobbie WL, Kersun L, Pierce L, Szalda D, Li Y, Barakat LP. **A mHealth Intervention for Adolescents and Young Adults Recently Off Treatment for Cancer**, paper presentation, Society of Pediatric Psychology Annual Conference, San Diego, CA, April 2015.

Schwartz LA, Daniel LC, Butler ES, Henry-Moss D, Bonafide C, Dowshen N, Hobbie W, Kersun L, Pierce L, Szalda D, Li Y, Barakat LP. **A Pilot Text Messaging Intervention for Adolescents and Young Adults Recently Off Treatment for Cancer**, poster presentation, Society for Adolescent Health and Medicine, Washington, DC, March 2016.

Grants

\$825,000, **Centers for Disease Control Special Interest Project (U48 DP005053-02S1)**, Sept. 2015-Sept. 2018.

AYA Self-Management via Texting, Education & Plans for Survivors: This randomized controlled trial will create and deliver customized survivorship care plans to AYA cancer survivors and test whether a tailored mobile intervention provided enhances survivorship care plan uptake.

\$55,000, **Baldrick's Foundation Supportive Care Grant**, July 2015-June 2016.

THRIVE 2.0: A mHealth Intervention to Promote Health for AYA Off Treatment: This study is developing a second-generation mobile health (app-based) intervention for adolescents and young adults who recently completed cancer treatment to improve adjustment and engagement off treatment.

THE CHAIR'S INITIATIVES | PAST

Round 1 (2006-2008)

Access Nurse Advisor and Care Coordination

Developing nursing roles, systems and tools to support patients, families and providers in coordinating access and care

ADHD in Primary Care

Creating computer tools, conferences and other supports to help primary care pediatricians manage patients with attention deficit hyperactivity disorder

Automated Appointment Reminders

Implementing a computerized system to place standardized reminder calls across specialties to support continuity of care

Center for Bone Health

Providing specialized care for children with poor bone health and helping establish international care guidelines

Center for Pediatric Eosinophilic Disorders

Providing specialized care for rare allergic disorders

Database Development

Developing databases and web-based applications to support physicians in research and care

Multidisciplinary Cancer Survivorship Program

Creating a monthly clinic where cancer survivors see numerous specialists with expertise in the late effects of cancer treatment

Office of Fellowship Programs

Coordinating and streamlining application, evaluation, curriculum development and accreditation for all fellowship programs in Pediatrics

Pediatric Knowledgebase

Creating a web-based application that combines data about drugs with data about individual patients to help improve outcomes

Sudden Cardiac Death Prevention

Screenings for undiagnosed heart irregularities in children and teens, and training in CPR and defibrillator use for schools

Round 2 (2008-2010)

Anticoagulant Management Program

Improving monitoring and care for children taking blood-thinners

Chemotherapy Tracking Project

Computerizing records of cancer patients' complex drug regimens

CHOPLink Implementation, Quality and Patient Safety

Linking clinicians with computer specialists to ensure technology improves care

Collaborative Clinical Pathways

Establishing a framework so that computerized care guidelines widely used by residents and other physicians can be created more easily

Intestinal Rehabilitation Program

Coordinating and improving care for children with severe conditions that cause intestinal failure

Unit-based Patient Safety Walk-rounds

Providing a forum for the safety concerns of families and staff

FUTURE

Round 3 (2011-2013)

Minds Matter: Improving Pediatric Concussion Management

Defining guidelines for concussion care in emergency rooms, primary care practices, sports medicine and other settings

Assuring Quality and Safety at CHOP Community Pediatric Programs

Implementing a system to ensure that care at CHOP-affiliated units and programs at local hospitals is as excellent as at CHOP

A Shared Decision-making Portal for Pediatric Chronic Illness

Designing a computer portal shared by parents and clinicians to improve communication and care for asthma

Improving Hospital Care for and Service Delivery to Individuals with Autism Spectrum Disorders

Finding better ways to communicate with and care for patients with autism

Preventing Outpatient Central Line-associated Bloodstream Infections

Reducing the at-home incidence of one of the most costly problems in healthcare

Transitioning from Pediatric to Adult Services: A Primary-care-based Model

Helping young people with chronic illness move to and stay with adult primary care providers

Round 5 (2015-2017)

An Integrative and Educational Pediatric Genomics Initiative

Helping more patients and families use and understand genomic (gene) testing

Developing a Hospital-wide Fertility Preservation Program

Helping patients whose treatments may cause infertility use sperm banking, egg harvesting and other fertility options

Integrating Apps in Pediatric Practice (iApp)

Developing a process for the integration of health apps into care at CHOP

Fostering Healthcare Coordination of Children in Foster Care

Establishing a healthcare coordination model for children in foster care

Leveraging Predictive Analytics and Technology to Decrease Missed Appointments

Improving access and continuity of care using data to predict who will miss provider appointments

Multidisciplinary Intervention Navigation Team (MINT) for Pediatric to Adult Medical System Transitions

Providing a centralized service to assist with difficult healthcare transitions

BOOST BRILLIANCE

The Chair's Initiatives is an internal grant program at The Children's Hospital of Philadelphia. It funds multidisciplinary teams who focus their knowledge and team-building skills on areas for improvement at CHOP.

The program represents an excellent opportunity for donors interested in helping incredibly bright, motivated teams quickly bring about change that benefits patients and families. For more information, call 267-426-5332 or visit giving.chop.edu.





Whitney Petrosa (left), C.R.N.P., and Therese Giglia (right), M.D., helped lead a Chair's Initiative to reduce blood clots in cardiac patients like Vanessa (center), 14, who had a heart transplant.



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