

2018 Annual Report - Building Digital Wellness for Children and Adolescents

Michael Rich, MD, MPH, Founder and Director



Our job is to master, and teach our children to master, the power tools of the 21st Century, so that we all become smarter, stronger, and kinder. – Michael Rich, MD, MPH

The Brave New Digital World

Today's children and youth are growing up in a drastically different environment than their parents did. The Digital Revolution has changed the lives, behaviors, health and development of children as dramatically as the Industrial Revolution changed their ancestors. Reports of cyberbullying compete with news of lives saved using the same technology. Parents, educators, and policymakers are concerned and confused because there is no shortage of stories, powerful opinions, and recommendations reacting to those stories and based on those opinions. What we feed our children's eyes and ears, and their minds and hearts, is as important as what we feed their bodies.

Our mission

Since 2002, the Center on Media and Child Health (CMCH), based at Boston Children's Hospital (BCH), Harvard Medical School's pediatric teaching hospital, has replaced opinion and speculation with rigorous science, revealing how the media children use and how they use them affect their physical, mental, and social health, in positive and negative ways. CMCH is a unique center of excellence, researching and translating scientific evidence into practical and effective parenting and education strategies. We are dedicated to understanding how the way children use interactive digital media can influence their well-being, to recognizing and treating media-related health problems, and to communicating pro-active strategies for raising healthy, happy and kind children in the Digital Age. Our mission is to ensure that children and adolescents create and consume media in ways that promote healthy development and avoid harm.

Our strategic approach

- **Investigation** – Studying the positive and negative health effects of digital media on children. We do this through CMCH research and by curating evidence from around the world.
- **Translation** – Building on the scientific evidence to develop practical, actionable guidance for parents, teachers, clinicians, and other stakeholders. We accomplish this through in-person presentations; by providing electronic "toolkits" to pediatric clinicians and parents; and via press appearances, publications, and social media.
- **Innovation** – Developing creative ways of using digital media tools and applications to support and enhance children's health and development.
- **Clinical intervention** – Diagnosis and treatment for children and adolescents who are struggling with digital media-related health and behavioral problems, such as Problematic Interactive Media Use (PIMU), colloquially referred to as "digital addiction". At the Clinic for Interactive Media and Internet Disorders, we also are developing treatment protocols and training clinicians to identify and treat PIMU in the community.

Key initiatives

Investigation/Research



Studying effects of interactive media on kids in Alberta, Canada: Growing Up Digital

Schools around the world are struggling with a dilemma; technology can expand and enrich education, but it also can lure children with endless entertainment and social distractions.

Teachers and schools report that they are experiencing challenges with media use both inside and outside the classroom. CMCH has partnered with the Alberta Teachers Association and the University of Alberta, Canada to follow media exposure, health, and developmental outcomes of 3,000 young people from toddlerhood into secondary education. Together, we're studying technology's impact on the well-being and functioning of children and adolescents. After conducting baseline surveys to identify parents' and educators' concerns and perspectives, we crafted a longitudinal study, Growing Up Digital (GUD), to better respond to the arising challenges and needs within the educational system. GUD research uses CMCH's multimodal Measurement of Youth Media Exposure (MYME) method delivered through young people's smartphones to comprehensively collect all active use and ambient exposure to media. MYME samples participants' behaviors and experiences in real time over one week, collecting current health and development status. Collecting these media exposure and health data annually, year after year, will allow us to follow young people's developmental trajectories in order to predict and prevent unhealthy outcomes in much the way that the Framingham Heart Study has revolutionized cardiovascular health research.

Studying how Digital Age children play in the U.S. and Mexico: *#MorePlayToday*

With support and partnership from Hasbro, Inc., CMCH has teamed up with Bentley University, Cambridge Focus, and 2-Morrow Research to study how play, as it moves seamlessly between physical and digital environments, influences child development.

#MorePlayToday, begun in 2015, uses a modified version of MYME, CMCH's proprietary research method, to study children's play and the contexts in which it happens among a large cohort in the US and Mexico aged 2.5 through 7 years. The research assesses the relationships among play and children's social-emotional development, cognitive abilities, and executive functioning. Experts see children's play as one of the most critical activities for fostering healthy development.

Screen media continue their incursion into children’s unscheduled time, shifting play patterns. These new play patterns are understudied. MorePlayToday (MPT) examines children’s play in their out-of-school settings, considering screen media as both a potential new form of play and a competitor for children’s time with traditional play. Eight times a day, a sampling of participating parents from the U.S. and Mexico complete a smartphone assessment of their children’s activities. Objective measures of the children’s cognitive, social-emotional, and executive function skills are obtained every six months.

In the U.S., children who engaged in more play spent less time using media, while in Mexico, more play was linked to more media use.

CMCH finished collecting data for the fourth and final wave of the MPT study. As we prepare the most recent data for analyses, we are releasing findings from earlier waves. At the annual meeting of the International Communication Association, we presented findings showing how associations between play and media use differ by cultural setting. In the U.S., children who engaged in more play spent less time using media, while in Mexico, more play was linked to more media use. A manuscript reporting these findings is under review for academic publication. Research describing the links between different types of play (including use of screen media) and cognitive, social, and behavioral outcomes was accepted for presentation at the 2019 meeting of the Society for Research in Child Development and at the Pediatric Academic Societies meeting.

Translation – Parent/Caregiver Education and Outreach

Our website, social media platforms, research library and online advice column

For the past nine years, Comcast NBCUniversal has supported CMCH efforts to translate the latest scientific evidence of media effects on children into education and outreach. Our resources are free to the public and include our informative website, cmch.tv, and [Ask the Mediatrician \(AtM\)](#).

AtM, our online advice column, offers the latest evidence about media effects on child health to parents and caregivers, tailored to the real life concerns facing families today. AtM is currently amidst a redesign, following its acquisition by Mediatrics, Inc. We also have a robust presence on social media platforms including [Facebook](#), [Twitter](#), [Instagram](#), and [YouTube](#), which serve a variety of followers from parents and caregivers to researchers, educators and clinicians. Our online Database of Research is a free research library of evidence from around the world, and is currently undergoing a grant-supported overhaul.

CMCH Clinician Toolkit

The CMCH Clinician Toolkit allows pediatric providers to assess children and adolescents for physical and mental health issues related to media use. Including screening forms, patient education materials and more, the Toolkit integrates media exposure into the child's medical history and provides anticipatory guidance for each developmental



stage. Through the generous support of Harvard Pilgrim Health Care (HPHC), the Center piloted the Toolkit as a standard of care tool with two Massachusetts pediatric practices. We presented preliminary findings of the two-month study at the American Psychological Association's Technology, Mind and Society conference in April. Importantly, the Toolkit gave clinicians the impetus to discuss media-related health issues with their patients.

We used the data from the study to create a streamlined version of the Toolkit, which we plan to pilot within a pediatric practice and evaluate our findings in 2019. HPHC is also funding the creation of a second Toolkit for providers caring for expecting parents and parents of infants and toddlers. Guided by the Toolkit, clinicians and parents will be able to proactively encourage children toward healthy, mindful media use.

Internet Mastery Guide

Through Facebook's support, we created and launched the online [Internet Mastery Guide](#) for parents and caregivers on the CMCH website. Based on developmental science, the Guide is full of practical tips. Parents can use the online guide to teach their children and themselves to use the Internet safely and mindfully.

Educating the public through news media and speaking arrangements

Society's increasing concerns about digital media's effect on children sparked a "techlash" among many parents. As the techlash hit the news, CMCH was able to provide evidence-based information to guide the conversation in a pro-active, problem-solving direction.

Press Highlights include:

The Wall Street Journal [iPhones and children are a toxic pair, say two big Apple investors](#)

NBC News [Is all this time on smartphones bad for our kids?](#)

CNN Business [Health experts urge Facebook to shut down Messenger Kids](#)

Variety [Hooked on hardware? Tech giants face tough questions over device addiction](#)

Boston Common Magazine [Men Of The Moment: Dr. Michael Rich](#)

Bloomberg [How tech is harming its most vulnerable users](#)

CNN Business [Tech's impact on kids: Lawmakers push for research](#)

WBUR Boston [How 'Fortnite' hooks your kid, and why experts say you may not need to worry](#)

Mashable [A cheat sheet for researching a video game your kid wants to play](#)

Speaking engagements

Dr. Rich and members of the CMCH team presented at conferences and invitation-only speaking engagements. Highlights include:

- Medical Grand Rounds—Boston Children's Hospital
- Medical Grand Rounds—Stanford University Department of Pediatrics
- The World Congress of the International Association for Child and Adolescent Psychiatry and Allied Professionals, Prague, Czech Republic
- The Organization for Economic Cooperation and Development, Zurich, Switzerland
- Australian Council for Education Leaders, Sydney, Australia
- The Society for Adolescent Health and Medicine, Seattle, Washington

Clinical intervention

Clinic for Interactive Media and Internet Disorders



Clinic for Interactive Media
and Internet Disorders

Delivering world-class care, the [Clinic for Interactive Media and Internet Disorders](#) (CIMAID) launched in 2017 as part of Boston Children's Adolescent/Young Adult Program. CIMAID is the first dedicated clinical program at an academic medical center treating Problematic Interactive Media Use (PIMU). The World Health Organization's International Classification of Diseases is classifying Gaming Disorder as a mental health condition, but people with Gaming Disorder make up only part of the population who are struggling with PIMU. At CIMAID, we also see young people who have problematic use of social media, pornography, and information-bingeing with videos or text.

The interdisciplinary clinical team at CIMAID consists of a medical doctor, psychiatrist, psychologist, and social worker. The team evaluates children and adolescents, diagnosing issues from PIMU to obesity to school avoidance, depression, and suicidality. In addition, the team identifies issues—such as anxiety or ADHD—that underlie PIMU and may drive PIMU behaviors. CIMAID provides each family with a personalized recovery plan to be implemented by the child’s primary care providers or by the CIMAID team. These treatment plans frequently include talk therapy, coping strategies, behavioral modifications, and medication.

CMCH is conducting research to characterize these disorders; determine factors that place children at risk; develop and evaluate interventions and train clinicians to identify, intervene and prevent these problems. Our goal is to support clinicians, educators, and families with the information they need to prevent or intervene on PIMU in young people.

Future forward

We are bringing together organizations that hold children’s health, well-being and their digital lives as paramount. Working together, we are stronger, more effective and innovative in ways that will benefit young children and adolescents. We will find the balance between interactive digital media and users’ individual and societal well-being. We will be there as youth adopt and integrate today’s and “yet to come” devices, platforms, and applications. We will make sure all young people are able to use interactive media in a healthy way. CMCH is finding and promoting ways for parents, caregivers, educators, and clinicians to harness media’s power for good.

Thank you to our Leadership Board, our industry partners and our supporters

Established this year, CMCH’s Leadership Board brings together leaders in children’s play, health insurance, television, film, education, and health care. Our Board members are: Katy Giffault of Hasbro, Dr. Catherine Gordon of Boston Children’s Hospital, Ramy Katrib of Digital Film Tree, Dr. Phil McRae of the Alberta Teachers’ Association, Dr. Michael Sherman of Harvard Pilgrim Health Care, and Tiffany Shlain of Let it Ripple Film Studio.

Many thanks, to all of our partners and supporters for your ongoing efforts to keep children safe.

