

**Kao-Ping Chua, MD, PhD**  
**Assistant Professor of Pediatrics**  
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## **Education and Training**

### **Education**

08/1998-05/2002	BS in Neuroscience, <i>summa cum laude</i> , Vanderbilt University, Nashville, TN
08/2002-05/2007	MD, Washington University School of Medicine, St. Louis, MO
08/2011-05/2015	PhD in Health Policy (Evaluative Sciences and Statistics concentration), Harvard University, Cambridge, MA

### **Postdoctoral training**

07/2007-06/2010	Residency in Pediatrics, Boston Combined Residency Program (Boston Children's Hospital and Boston Medical Center), Boston, MA
07/2010-06/2010	Postdoctoral Research Fellow, Harvard Pediatric Health Services Research Fellowship, Boston, MA

## **Certification and Licensure**

### **Certification**

10/2010-present	American Board of Pediatrics, Certificate #96996
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### **Licensure**

07/2010-06/2015	State of Massachusetts, License #242746
06/2015-09/2017	State of Illinois, License #036.138203
10/2017-present	State of Michigan, License #4301113525

## **Academic, Administrative, Clinical, Research and Military Appointments**

### **Academic appointments**

07/2015-09/2017	Assistant Professor of Pediatrics, University of Chicago, Chicago, IL
07/2015-09/2017	Assistant Professor of Public Health Sciences, University of Chicago, Chicago, IL
10/2017-present	Clinical Assistant Professor in Pediatrics, University of Michigan Medical School, Ann Arbor, MI

## **Clinical appointments**

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| 07/2010-06/2015 | Urgent Care Attending, Boston Children's Hospital Emergency Department, Boston, MA                     |
| 07/2010-06/2015 | Urgent Care Attending, South Shore Hospital Emergency Department, Weymouth, MA                         |
| 10/2017-present | Primary Care Physician, Department of Pediatrics, University of Michigan Medical School, Ann Arbor, MI |

## **Research appointments**

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|-----------------|---|
| 07/2010-06/2012 | Research Fellow, Boston Children's Hospital, Boston, MA |
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## **Gaps**

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|-----------------|--|
| 07/2004-06/2005 | Jack Rutledge Fellow, American Medical Student Association. Between my third and fourth year of medical school, I worked at the American Medical Student Association's national office in Reston, VA. I led the organization's efforts to ensure universal access to health care and to eliminate health care disparities. |
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## **Research Interests**

As a practicing general pediatrician with doctoral training in health policy, I combine a clinical perspective with rigorous methods to conduct research that is relevant to children, families, and policymakers. A major area of my research is opioid prescribing and policy. For example, I conducted one of the first studies to demonstrate opioid prescribing patterns associated with prescription opioid overdose in adolescents and young adults prescribed opioids. A second major area of my research is prescription drug spending and policy. For example, I demonstrated that annual out-of-pocket spending on the EpiPen increased by 123% between 2007 and 2014 among commercially insured patients due to price increases during this period. A final major area of my research is low-value care. For example, I translated recommendations from sources such as Choosing Wisely into 20 measures that identify inappropriate pediatric services in claims data, including 5 measures related to antibiotic overuse. Using these measures and claims from 4.4 million commercially insured children across the U.S., I found that at least 10% of children received one of the 20 low-value services in 2014.

## **Grants**

### **Current Grants**

#### **National Institute on Drug Abuse (1K08DA048110-01)**

Using Default Opioid Prescription Settings to Limit Excessive Opioid Prescribing to Adolescents and Young Adults

PI: Kao-Ping Chua

05/2019-04/2024

Role: PI

\$911,520

**Janette Ferrantino Award (University of Michigan)**

A National Profile of Opioid Prescribing to Children

PI: Kao-Ping Chua

05/2018-05/2020

Role: PI

\$40,000

**Gorman Scholar Award (University of Michigan)**

Naloxone Prescribing to Adolescents and Young Adults at High Risk of Overdose

PI: Kao-Ping Chua

01/2019-10/2021

Role: PI

\$30,000

**Past Grants**

**Academic Pediatric Association Young Investigator Award**

Predictors of Overuse in Pediatrics

PI: Kao-Ping Chua

03/2017-04/2019

Role: PI

\$8,697

**Institute for Health Policy and Innovation (University of Michigan)**

Design and Implementation Problems for Opioid Prescribing Limits for Acute Pain

PI: Kao-Ping Chua

11/2018-04/2019

Role: PI

\$10,000

**Institute for Translational Medicine Pilot Grant (University of Chicago)**

Use of Low-Value Pediatric Services in the Medicaid Population

PI: Kao-Ping Chua

06/2016-06/2017

Role: PI

\$32,575

**NIH Loan Repayment Program (Health Disparities)**

The Effect of Health Insurance Loss on Health Outcomes at Age 19

PI: Kao-Ping Chua

07-2011-06/2013

Role: PI

**NRSA T32 training grant (NRSA T32-HS00063)**

Harvard Pediatric Health Services Research Fellowship

PI: Jonathan Finkelstein

07/2011-06/2013

Role: Trainee

## **Fred Lovejoy Resident Research and Education Award (Boston Children's Hospital)**

Effect of Implementing a Night Team System on Resident Sleep/Work Hours

PI: Kao-Ping Chua

07/2009-06/2010

Role: PI

\$5,000

## **Honors and Awards**

### **Institutional**

1998-2002	Harold Stirling Vanderbilt Scholarship, Vanderbilt University (full-tuition academic scholarship)
2002	Runner-up for Founder's Medal, Vanderbilt University (award for the top student in the College of Arts & Sciences)
2002-2007	Distinguished Student Scholarship, Washington University School of Medicine (full-tuition academic scholarship)
2004	Harrison Scholar, Washington University School of Medicine (award for the top medical students in internal medicine)
2007	George F. Gill Prize in Pediatrics, Washington University School of Medicine (award for the top medical students in pediatrics)
2019	Faculty Award for Health Services Research, Department of Pediatrics, University of Michigan Medical School

### **National**

2017	Academic Pediatric Association Young Investigator Award
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## **Memberships in Professional Societies**

2007-present	American Academy of Pediatrics
2010-present	AcademyHealth
2014-present	Academic Pediatric Association
2015-present	Society for Pediatric Research, Junior Section

## **Editorial Positions, Boards, and Peer-Review Services**

### **Journal Reviewer**

2014-present	<i>Milbank Quarterly</i>
2014-present	<i>Journal of Adolescent Health</i>
2015-present	<i>Health Services Research</i>
2015-present	<i>The Journal of Pediatrics</i>
2016-present	<i>Medical Care</i>
2017-present	<i>Public Health Reports</i>

2017-present	<i>American Journal of Public Health</i>
2018-present	<i>Medical Care Research and Review</i>
2018-present	<i>Academic Pediatrics</i>
2018-present	<i>Pediatrics</i>
2018-present	<i>Journal of Addictive Diseases</i>
2018-present	<i>JAMA Network Open</i>
2019-present	<i>Addiction</i>
2019-present	<i>JAMA</i>
2019-present	<i>BMJ</i>
2019-present	<i>Journal of the American Academy of Child and Adolescent Psychiatry</i>
2019-present	<i>JAMA Pediatrics</i>
2019-present	<i>PLoS Medicine</i>

### **Editorial Board**

2019-present	<i>Medical Care Research and Review</i>
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### **National service**

2019-present	Abstract Reviewer, Pediatric Academic Societies Meeting
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### **Teaching Activity**

#### **Institutional**

2013	Harvard Kennedy School Teaching Fellow. Course: "Quantitative Analysis and Empirical Methods." One semester, 20 lectures, 50 Masters of Public Policy graduate students
2015-2017	Pritzker School of Medicine Guest Lecturer ("Health Insurance 101") Course: The American Health Care System. 1 lecture, 80 first-year medical students
2015-2017	Pritzker School of Medicine Guest Lecturer ("Regression Analysis") Course: Introduction to Medical Evidence. 2 lectures, 80 first-year medical students.
2019	National Clinical Scholars Program core seminar series lecture ("Measuring Low-Value Pediatric Care"). 1 lecture, 12 master's students.
2019	Group Facilitator for University of Michigan Massive Open Online Course "Understanding and Improving the U.S. Health Care System." 1 session, 30 students.

### **Mentoring**

**University of Chicago, Department of Public Health Sciences** 2015-2017

Thesis advisor for Masters of Science for Clinical Professionals program:

- Elizabeth Tung, M.D., General Internal Medicine Fellow, Section of General Internal Medicine, Department of Medicine, University of Chicago
- Olga Kantor, M.D., General Surgery Resident, University of Chicago

- Joyce Woo, M.D., Pediatrics Resident, Comer Children's Hospital, University of Chicago

## **Committee and Administrative Services**

### **Committee Services**

#### **Institutional**

2017-present	Institute for Healthcare Policy and Innovation, University of Michigan, Member
2017-present	University of Michigan Injury Center, University of Michigan, Member
2018-present	Center for Study of Drugs, Alcohol, Smoking and Health, University of Michigan, Faculty Affiliate
2018-present	Institute for Research on Women and Gender, University of Michigan, Faculty Affiliate

### **Visiting Professorships, Seminars, and Extramural Invited Presentations**

#### **Extramural invited presentations**

1. Effects of implementing a night team system on resident sleep and work hours. Platform presentation, Pediatric Academic Societies 2010 Annual Meeting, Vancouver, British Columbia, Canada, May 2010.
2. Prevalence and predictors of substitutable ED visits by children. Platform presentation, Pediatric Academic Societies 2016 Annual Meeting, Boston, MA, May 2016.
3. Defining and measuring overuse in pediatrics. Dartmouth University Department of Pediatrics Grand Rounds, Hanover, NH, October 2017.
4. Why should we care about low-value pediatric care? University of Chicago Advancing Pediatric Quality Symposium, Chicago, IL, November 2018.
5. Doctor and pharmacy shopping among the family members of children prescribed opioids. Platform presentation, Pediatric Academic Societies 2019 Annual Meeting, Baltimore, MD, April 2019.
6. Improving the safety of opioid prescribing to adolescents and young adults. Symposium co-chair and speaker, Pediatric Academic Societies 2019 Annual Meeting, Baltimore, MD, April 2019.
7. Orphan drug spending on orphan indications among the commercially insured. Platform presentation, AcademyHealth Annual Research Meeting, Washington, DC, June 2019

#### **Seminars**

1. Why should we care about low-value pediatric care? University of Michigan Department of Pediatrics Grand Rounds, Ann Arbor, MI, April 2018.
2. Measuring Low-Value Pediatric Services Using Claims Data. University of Michigan National Clinical Scholars Program, Ann Arbor, MI, August 2019

## **Publications**

### **Peer-Reviewed Publications**

1. **Chua KP**, Chun MM. Implicit scene learning is viewpoint dependent. *Perception & Psychophysics*. 2003;65(1):72-80. PMID: 12699310
2. Kelley TA, Chun MM, **Chua KP**. Effect of scene inversion on change detection of targets matched for visual salience. *J Vis*. 2003;3(1):1-5. PMID: 12678620
3. **Chua KP**, Gordon MB, Sectish TC, Landrigan CP. Effects of a night team system on resident sleep and work hours. *Pediatrics*. 2011;128(6):1142-1147. PMID: 22123867
4. **Chua KP**, Schuster MA, McWilliams JM. Differences in health care access and utilization between older adolescents and young adults with asthma. *Pediatrics*. 2013;131(5):892-901. PMID: 23610211. PMCID: PMC4074656
5. **Chua KP**, Sommers BD. Changes in health and medical spending among young adults under health reform. *JAMA*. 2014;311(23):2437-2439. PMID: 24938568
6. **Chua KP**, Neuman MI, McWilliams JM, Aronson PL. Association between clinical outcomes and hospital guidelines for cerebrospinal fluid testing in febrile infants aged 29-56 days. *J Pediatr*. 2015;167:1340-1346.e9. PMID: 26477870. PMCID: PMC5535778
7. Sommers BD, **Chua KP**, Kenney JM, Long SK, McMorro S. California's early coverage expansion under the Affordable Care Act: a county-level analysis. *HSR*. 2016; 51(3):825-845. PMID: 26443883. PMCID: PMC4874826
8. Tung EL, Baig AA, Laiteerapong N, Huang ES, **Chua KP**. Racial and ethnic disparities in diabetes screening between Asian Americans and other adults. *J Gen Intern Med*. 2016;32(4):423-429. PMID: 27848187. PMCID: PMC5377880
9. **Chua KP**, Schwartz AL, Volerman A, Conti RM, Huang ES. Use of low-value pediatric services among the commercially insured. *Pediatrics*. 2016; 138(6): e20161809. PMID: 27940698. PMCID: PMC5127068
10. **Chua KP**, Conti RS. Out-of-pocket spending among commercially insured patients for epinephrine autoinjectors between 2007 and 2014. *JAMA Intern Med*. 2017; 177(5):736-739. PMID: 28346591. PMCID: PMC5377880
11. Trueger NS, **Chua KP**, Hussain A, Liferidge AT, Pitts SR, Pines JM. Incorporating alternative care site characteristics into estimates of substitutable ED visits. *Med Care*. 2017; 55(7):693-697. PMID: 28498199

12. **Chua KP**, Shrime MG, Conti RS. Effect of FDA investigation on opioid prescribing to children after tonsillectomy/adenoidectomy. *Pediatrics*. 2017;140(6): e20171765. PMID: 29146621
13. **Chua KP**, Conti RS. Out-of-pocket spending on orphan drug prescriptions among commercially insured adults in 2014. *J Gen Intern Med*. 2019;34(3):338-340. PMID: 30324293
14. McCabe SE, Wilens TE, Boyd CJ, **Chua KP**, Voepel-Lewis T, Schepis TS. Age-specific risk of substance use disorders associated with controlled medication use and misuse subtypes in the United States. *Addict Behav*. 2019; 90:285-293. PMID: 30472537
15. **Chua KP**, Fischer MA, Linder JA. Appropriateness of outpatient antibiotic prescribing among privately insured US patients: ICD-10-CM based cross sectional study. *BMJ*. 2019;364:k5092. PMID: 30651273. PMCID: PMC6334180
16. Harbaugh CM, Lee JS, **Chua KP**, Kenney B, Iwashyna TJ, Englesbe MJ, Brummett CM, Bohnert AS, Waljee JF. Association between long-term opioid use in family members and persistent opioid use after surgery among adolescents and young adults. *JAMA Surg*. 2019; Feb 27:e185838. PMID: 30810738
17. **Chua KP**, Brummett CM, Conti RC, Haffajee RL, Prosser LA, Bohnert ASB. Assessment of prescriber and pharmacy shopping in the family members of patients prescribed opioids. *JAMA Netw Open*. 2019; 2(5):e193673. PMID: 31074819.
18. **Chua KP**, Harbaugh CM, Brummett CM, Bohm LA, Cooper KA, Thatcher AI, Brenner MJ. Association of perioperative opioid prescriptions with risk of complications after tonsillectomy in children. *JAMA Otolaryngol Head Neck Surg* 2019 Aug 8. doi: 10.1001/jamaoto.2019.2107. [Epub ahead of print]. PMID: 31393537
19. Woo JL, Anderson BR, Gruenstein D, Conti RC, **Chua KP**. Minimum travel distance among publicly insured infants with severe congenital heart disease: potential impact of in-state restrictions. *Pediatr Cardiol*. 2019 Aug 28. doi: 10.1007/s00246-019-02193-1. [Epub ahead of print], PMID: 31463514
20. **Chua KP**, Brummett CM, Conti RM, Bohnert ASB. Association of opioid prescribing patterns with prescription opioid overdose in adolescents and young adults. *JAMA Pediatr* 2019 Dec 16: doi: 10.1001/jamapediatrics.2019.4878. [Epub ahead of print]. PMID: 31841589
21. Agarwal S, Bryan JD, Hu HM, Lee JS, **Chua KP**, Haffajee RL, Brummett CM, Englesbe MJ, Waljee JF. Association of state opioid duration limits with postoperative opioid prescribing. *JAMA Netw Open* 2019 Dec 2;2(12):e1918361. doi: 10.1001/jamanetworkopen.2019.18361. [Epub ahead of print]. PMID: 31880801
22. **Chua KP**, Schwartz AL, Volerman A, Conti RM, Huang ES. Differences in the receipt of low-value services between publicly and privately insured children. *Pediatrics* 2020; pii: e20192325. doi: 10.1542/peds.2019-2325. [Epub ahead of print]. PMID: 31911477



## **Viewpoints**

1. **Chua KP**, Conti RS, Freed GA. Appropriately framing child health care spending – a pre-requisite for value improvement. *JAMA* 2018; 319(11):1087-1088. PMID: 29482195
2. **Chua KP**, Brummett CM, Waljee JF. Opioid prescribing limits for acute pain: potential problems with design and implementation. *JAMA*. 2019; 321(7):643-644. PMID: 30703214

## **Blog posts**

1. **Chua KP**, Conti RS. Orphan Drugs for Opioid Use Disorder: An Abuse of the Orphan Drug Act. Health Affairs Blog, July 26, 2019. doi: 10.1377/hblog20190724.79581

## **Letters**

1. **Chua KP**, Brummett CM, Waljee JF. Limiting Opioid Prescribing – Reply. *JAMA*. 2019; 322(2):171-172.
2. **Chua KP**, Harbaugh CM, Brenner MJ. Opioid prescriptions and risk of complications after tonsillectomy in children. *JAMA Otolaryngol Head Neck Surg* 2019. doi: 10.0001/jamaoto.2019.2432 [Epub ahead of print]