Chong H. Kim

Be The Change

PERSONAL DETAILS

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EDUCATION

PhDc. Pharmaceutical Economics & Outcomes Research 2015-2019

University of Colorado Skaggs School of Pharmacy

> Coursework: Advanced Cost-effectiveness analysis, Advanced Epidemiology, Pharmaceutical Outcomes Research Methods, Health Economics

MS. Biostatistics & Bioinformatics 2015-2019

University of Colorado Skaggs School of Pharmacy

> Coursework: Stochastic Processes, Python & R Programming, Missing Data, Longitudinal analysis, Biostatistics Methods, Biostatistics Theory I/II.

MPH. Health Policy & Management 2012-2013

Columbia University Mailman School of Public Health

> Relevant Coursework: Decision Analysis, Health Economics, HealthCare Accounting and Budgeting, Comparative Effectiveness Outcomes Research, Public Health Ethics, US Healthcare Systems, Program Evaluation, Epidemiology I/II, Biostatistics, Large Scale Data Analysis, Genetic Epidemiology (GWAS, Linkage Analysis), Consulting Workshop, Quality of Healthcare, Research Methods.

BSc. Biochemistry & Molecular Biology 2005-2009

Michigan State University

> Relevant Laboratory Skills: PCR, SDS-PAGE, Immunoprecipitation, Drosophila management, Molecular cloning of DNA, GC-MS, Autoclaving, Statistics using Excel.

WORK EXPERIENCE

PhD Student/Candidate 2015-present

University of Colorado, Full-time

- Conducted and published research on cost-effectiveness of various interventions (e.g. smart inhalers) and programs (e.g. transfusion medicine diagnostic practices).
- Conducted and published a systematic review of asthma cost-effectiveness models.
- Conducted a meta-analysis of ovale closure vs. medical therapy for secondary stroke prevention.
- Conducted various types of simulations on cost-effectiveness analyses and prediction models.

- Analyzed and drafted Drug Utilization Review regarding policy changes affecting Colorado Medicaid Beneficiaries.
- Created R-based web applications for statistical analyses (e.g. structural equation modeling and survival analysis).
- Developed a prediction algorithm that predicts the trajectory of recovery for patients that have undergone knee replacement surgery.
- Conducted a spatial analysis project to determine the impact of long lasting insecticide-treated nets on Malaria prevalence in Uganda.

PUBLICATIONS

Peer-Reviewed Publications

In-Progress

- A spatial analysis of the association between LLIN use and malaria prevalence after a LLIN campaign in a community in northeast Uganda. Chong H. Kim, , Dorothy Echodu3, Humphrey Wanzira , Alyssa Forber , Kathryn Colborn

- Development and validation of a "patient-like me" clinical prediction model for patient-reported pain and function after primary total knee replacement surgery. Chong H. Kim, Timothy Loar, Kathryn Colborn, Andrew Kittelson

- Development and validation of asthma cost-effectiveness model incorporating real-time adherence and inhalation technique. Chong H. Kim, Susanne Van de hei, Job Van Boven.

- Determination of clusters of among asthma inhaler adherence and technique groups among asthma patients. Chong H. Kim, Susanne Van de hei, Job Van Boven, Richard Costello.

- Development and validation of prediction model for predicting the risk of having severe ADAMTS13 deficiency. Chong H. Kim, Sierra C. Simmons, Chau M. Bui, Ning Jiang, and Huy P. Pham

- Therapeutic Plasma Exchange Practice Patterns in the US – 2013 to 2017. Chong H. Kim, Sierra C. Simmons, Chau M. Bui, Ning Jiang, and Huy P. Pham

- Apheresis utilization in the US – 2007 to 2017. Chong H. Kim, Sierra C. Simmons, Chau M. Bui, Ning Jiang, and Huy P. Pham

- Development and validation of prediction model for predicting future asthma exacerbation using beta-agonists: a multi-country analysis. Chong H. Kim, Susanne Van de hei, Job Van Boven, Heather Hoch, Laura Saba, Patrick Sullivan, Robert McQueen, Jonathan D. Campbell,

- Factors associated with β-agonist use and future asthma exacerbation among persistent asthma patients: A mediation analysis. Chong H. Kim, Susanne Van de hei, Job Van Boven, Heather Hoch, Laura Saba, Patrick Sullivan, Robert McQueen, Jonathan D. Campbell,

- Longitudinal impact of β-agonist use among persistent asthma patients. Chong H. Kim, Susanne Van de hei, Job Van Boven, Heather Hoch, Laura Saba, Patrick Sullivan, Robert McQueen, Jonathan D. Campbell,

SOFTWARE & APPLICATIONS

Web Applications

- Created Structural Equation Modeling (SEM) web application using R.
- Created survival curve extraction web application (for use in health technology assessment) using R.
- Working on decision curve analysis web application for determining clinical usefulness of prediction model.
- Working on Personalized Reference Chart web application for helping providers (esp. physical therapy) understand trajectory of patient outcomes (e.g. knew surgery recovery).
- Created an algorithm that predicts the trajectory of patient health outcomes based on extending a standard K nearest neighbours algorithm with predictive mean matching: PMMSKNN

R Package

- Working on decision curve analysis R package for determining clinical usefulness of prediction model based on Vickers et al.

Excel Dashboards

- Created cost-effectiveness dashboards in Excel for determining the cost-effectiveness of 1) smart inhaler system for severe asthma patients in the Netherlands, 2) FEIBA vs. rFVIIa for the treatment of Acquired Hemophilia A patients and 3) ADAMTS13 and/or plasmic score test for TTP patients.

TEACHING

Biostatistics Methods Core　　　　　　　　　　　　　　　　　　　2013
Columbia University Mailman School of Public Health
　　　Teaching Assistant. October 2013 - December 2013

AWARDS, FELLOWSHIP, & SCHOLARSHIP

Summer Scholarship　　　　　　　　　　　　　　　　　　　　　2019-May
PhRMA

Summer Internship　　　　　　　　　　　　　　　　　　　　　2019-May
Stratevi

Summer Institutes Scholarship　　　　　　　　　　　　　　　　2018-July
University of Washington Dept. of Biostatistics

Summer Research Fellowship　　　　　　　　　　　　　　　　　2018-May
University of Groningen-AstraZeneca

MPI Undergraduate Research Grant　　　　　　　　　　　　　　2009-May
MSU College of Natural Sciences

Korean Student Organization Scholarship 2008-May
MSU Korean Student Organization

MSU Biochemistry Undergraduate Research Award 2008-May
MSU Department of Biochemistry & Molecular Biology

ISU Computational and Systems Biology Summer Fellowship 2008-May
Iowa State University

MSU College of Natural Science Summer Fellowship 2008-May
MSU College of Natural Science

Dallas Chapin J Endowed Scholarship 2007-May
MSU

PRESENTATIONS & TALKS

Predictive ability and clinical usefulness of short-acting β-agonist use as a marker of future asthma exacerbations 2019-May
International Society for Pharmacoeconomics & Outcomes Research 2019 International Meeting
    Conference Presentation

Cost-effectiveness analysis of asthma adherence and technique improving device in the Netherlands 2018-Nov
Asia Pacific Society for Respirology (APSR)
    Conference Presentation

Spatial analysis of the association between LLIN use and malaria prevalence in a longitudinal cohort in northeast Uganda 2018-Nov
American Society of Tropical Medicine and Hygiene (ASTMH) 67th Annual Meeting
    Conference Presentation

Introduction to Git & Reproducible Research 2018-Oct
University of Colorado Department of Biostatistics & Bioinformatics
    BIOS 6624 Class Lecture

Derivation, validation, and testing of novel predicion model to identify severe vs. non-severe childhood epilepsy patients 2017-Oct
Western PharmacoEconomic Conference
    Conference Presentation

Utilization of FEIBA vs. Recombinant Factor VIIa in the Treatment of Acquired Hemophilia A - A cost-effectiveness analysis 2017-Jan
Skaggs Winter Symposium
    Conference Presentation

Do Asthma or COPD Cost-Effectiveness Models Have Similar Structures and Inputs? 2016-May
American Thoracic Society

Conference Presentation

Phenotypically matched vs. traditional screen method for preparing red blood cell units in patients with abnormal placentation: a decision analysis approach? `2016-Dec`
Skaggs Winter Symposium
Conference Presentation

SKILLS

Languages	English (fluent)
	Korean (fluent)
	Spanish (beginner)
Software	R, LaTeX, Python, C++, markdown, Visual Basic, SAS, SQL, Bash, TREEAGE
	Github
	Home page
Databases	IMS PharMetrics, OPTUM
Statistics	Linear, Generalized Linear, Stochastic, Longitudinal, and Geo-spatial models,

ORGANIZATION MEMBERSHIP

Biostatistics Student Association: UC Denver Student Chapter `2018-Present`
Member

ISPOR UC Denver Student Chapter `2013-present`
Member

International Society for Pharmacoeconomics & Outcomes Research UC Denver Student Chapter `2017-2018`
Vice President

PROFESSIONAL SERVICES

American Journal of Respiratory and Critical Care Medicine `2018-Present`
Peer Reviewer

Journal of Medical Decision Making `2018-Present`
Peer Reviewer

BMJ Open Respiratory Research `2018-Present`
Peer Reviewer

ERJ Open Research
Peer Reviewer

REFERENCES

Available upon request