

## EDUCATION

Rice University, Houston, TX

**Ph.D. in Statistics**

**M.S. in Statistics**

Thesis: "Bayesian Applications to Clinical Trials and Survival Analysis"

Honors: Qualifying exam passed "with distinction"

**2014-2018**

Louisiana State University, Baton Rouge, LA

**Masters of Applied Statistics M.Ap.St.**

Thesis: "Assessment of Simon and Price models for predicting citation accumulation"

**2012-2014**

Louisiana State University, Baton Rouge, LA

**B.S. in Mathematics**

Area of Concentration: Statistics

**2008-2012**

## AWARDS

T32: Cancer Training Grant

2014 – 2016

OFDA 2016 Scholarship

2016 – 2017

O'Bayes Conference Travel Award

2017

Best Biometrics Paper by an International Biometric Society Member

2019

## PUBLICATIONS AND PAPERS

Chapple, A. (2020). Bayesian subgroup clustering in phase I clinical trials. *SAGE Research Methods Cases*. doi: 10.4135/9781529742657

Odisho, Roumta MD; LeMoine, Felicia MD; Castillo-Quek, Jaimee MD; Chapple, Andrew PhD; Sutton, Elizabeth PhD; Boggs, Karli Mizell MD Novel Clinical Navigation System to Improve Prenatal Care for Patients With Diabetes in Pregnancy [27D], *Obstetrics & Gynecology*: May 2020 - Volume 135 - Issue - p 455-465 doi: 10.1097/01.AOG.0000663452.28907.e7

LeMoine, Felicia MD; Chapple, Andrew PhD; Sutton, Elizabeth PhD; Pam, Lakedra MD Characteristics of Patients Intending to Breastfeed in a Tertiary Obstetric Hospital in Louisiana [07O], *Obstetrics & Gynecology*: May 2020 - Volume 135 - Issue - p 158S doi: 10.1097/01.AOG.0000663760.63248.62

LeMoine, Felicia MD; Odisho, Roumta MD; Chapple, Andrew PhD; Sutton, Elizabeth PhD; Boggs, Karli Mizell MD Improving Maternal and Neonatal Outcomes for Patients With Diabetes by Clinical Navigation [16D], *Obstetrics & Gynecology*: May 2020 - Volume 135 - Issue - p 42S-43S doi: 10.1097/01.AOG.0000663464.71233.90

Cameron JE, Dennis DC, Herrel NR, Chapple AG, and Hagensee ME. Risk of abnormal cervical cytology in HIV-infected women testing positive for both human papillomavirus and Epstein-Barr virus in genital tract specimens. Accepted for publication in *Cancer Causes and Control*.

Chapple, AG, Peak, T, Hemal, A. A novel Bayesian continuous piecewise linear log-hazard model, with estimation and inference via reversible jump Markov chain Monte Carlo. *Statistics in Medicine*. 2020; 1– 15. <https://doi.org/10.1002/sim.8511>

Blackston, J.W., Chapple, A.G., McGree, J.M., McDonald, S.N., Nikles, J (2019). Comparison of aggregated N-of-1 trials with parallel and crossover randomized controlled trials using simulation studies. *Healthcare*, 7, 137.

Simkin, J., Bronstone, A., Chapple, A., Clement, R.C., Cohen-Rosenblum, A., Czarny-Ratajczak, M., Dasa, V. Hilliard, C., King, A., Krause, P., and Marrero, L. (2019). Letter to the Editor: Editorial: Beware of studies claiming that social factors are "independently associated" with biological complications of surgery. *Clinical Orthopedics and Related Research*. 477 (12): 2807-2809

Chapple, A. G. and Thall, P. F. (2019). Rejoinder to "A hybrid phase I-II/III clinical trial design allowing dose reoptimization in phase III". *Biometrics*.

- Peak, T. C., Russell, G. B., Dutta, R., Rothberg, M. B., Chapple, A. G. and Hemal, A. K. (2019). A National Cancer Database-based nomogram to predict lymph node metastasis in penile cancer. *BJU International*. 123: 1004-1010. [10.1111/bju.14652](https://doi.org/10.1111/bju.14652)
- Chapple, A.G., Blackston, J.W. (2019). Finding benefit in n-of-1 trials. *JAMA Intern Med*. 179(3):453-454.
- Christensen, B.J., Chapple, A.G., King, B.J. (2019). What is the Effect of Treating Mandibular Fractures on Weight and Prealbumin? *Journal of Oral and Maxillofacial Surgery*. 77 (6): 1-6.
- Peak, T., Su, Y., Chapple, A.G., Chryr,, J., Pollack, J., Deep, G. (2019). Syntaxin 6: A novel predictive and prognostic biomarker in papillary renal cell carcinoma. *Scientific Reports*. 9 (1): 3146.
- Chapple, A. G., Wojcik, J. J., & McDaniel, L. S. (2019). A regression based phase I clinical trial for late-onset toxicities without clinician elicitation. *Contemporary clinical trials communications*, 14, 100327. doi:10.1016/j.conctc.2019.100327
- Christensen, B.J., Chapple, A.G., King, B.J. (2018). How much weight loss can be expected after treating mandibular fractures? *Journal of Oral and Maxillofacial Surgery*.
- Peak, T., Russell, G.B., Dutta, R., Rothberg, M., Chapple, A.G., Hemal, A.K. (2018). An NCDB-based Nomogram to Predict Lymph Node Metastasis in Penile Cancer. *BJU International*. 123. [10.1111/bju.14652](https://doi.org/10.1111/bju.14652).
- Chapple, A.G., Thall, P.F. (2018). A hybrid phase I-II/III clinical trial design allowing dose re-optimization in phase III. *Biometrics*. 1– 11. <https://doi.org/10.1111/biom.12994>
- Peak T.C., Chapple, A.G., Coon, G., Hemal, A. (2018). Utilizing a Semi-Competing Risk Model to Predict Perioperative and Oncologic Outcomes after Radical Cystectomy. *British Urology Journal*. 10 (11): 317-326
- Chapple, A.G., Thall, P.F. (2018). Subgroup-specific dose finding in phase I clinical trials based on time to toxicity allowing adaptive subgroup combination. *Journal of Pharmaceutical Statistics*. 1-16.
- Chapple, A.G. (2018). Modeling ISIL terror attacks and their fatality rates with a Bayesian reversible jump marked point process. *Journal of Economics and Econometrics*. *Economics and Econometrics Society*. 61(3): 1-14.
- Chapple, A.G., Vannucci, M., Thall, P.F., Lin, S.H. (2017). Bayesian variable selection for a semi-competing risks model with three hazard functions. *Journal of Computational Statistics and Data Analysis*. 112: 170-185.
- Liru, H., Chapple, A.G., Liao, Z., Komaki, R., Thall, P.F., Lin SH. (2016) Bayesian regression analyses of radiation modality effects on pericardial and pleural effusion and survival in esophageal cancer. *Journal of Radiation Oncology*. 121 (1): 70-74.
- Chapple, A. (2016) A Bayesian Reversible Jump Piecewise Hazard approach for modeling rate changes in mass shootings. *Journal of Economics and Econometrics*. 59 (3). 19-31.
- Han, K.J., Pitman, W.D., Chapple, A. (2014). Moisture Concentration Variation of Silages Produced on Commercial Farms in the South-Central USA. *Asian-Australasian Journal of Animal Sciences*. 2014;27(10):1436-1442.

#### ABSTRACT SUBMISSIONS

- Kaitlyn Taylor MD, Andrew Chapple PhD, Amie Davenport RN, Mike Miller, Sharon Odenwald RN, Landon Roy, Lakedra Pam MD, Elizabeth Sutton PhD. Risk Factors for Peripartum Hemorrhage in a Tertiary Hospital in South-Central Louisiana. ACOG 2020 Annual Clinical and Scientific Meeting. Seattle, Washington. [Accepted for poster presentation]
- Emily Tompkins MD, Andrew Chapple PhD, Sarah Buzhardt MD, Elizabeth Sutton PhD. Effect of Cervical Dilatation at Time of Amniotomy on Cesarean Rates in a Nulliparous Population. ACOG 2020 Annual Clinical and Scientific Meeting. Seattle, Washington. [Acceptance status pending]
- Felicia LeMoine, Andrew Chapple, Elizabeth Sutton, Lakedra Pam. Characteristics of Patients Intending to Breastfeed in a Tertiary Obstetric Hospital in Louisiana. ACOG 2020 Annual Clinical and Scientific Meeting. Seattle, Washington. [Accepted for poster presentation]
- Felicia LeMoine, Roumta Odisho, Andrew Chapple, Elizabeth Sutton, Karli Boggs. Improving Maternal and Neonatal Outcomes for Patient with Diabetes by Clinical Navigation. ACOG 2020 Annual Clinical and Scientific Meeting. Seattle, Washington. [Accepted for poster presentation]

Roumta Odisho, Felicia LeMoine, Jaimee Castillo-Quek, Andrew Chapple, Elizabeth Sutton, Karli Boggs. Novel Clinical Navigation System to Improve Prenatal Care for Patient with Diabetes in Pregnancy. ACOG 2020 Annual Clinical and Scientific Meeting. Seattle, Washington. [Accepted for poster presentation]

A.B. Clark, M. Brown, O. Gilbert, A. Chapple, A.M. Jernigan and N. Nair. Look good, feel good? the effects of body image on quality of life in gynecologic cancer patients. Society of Gynecologic Oncology Annual Meeting, Toronto, Canada (accepted for poster presentation)

O.E. Gilbert, N.L. Rezvani, C.R. Smith, A. Chapple, N. Nair, and A.M. Jernigan (2020, Mar 28). Patient Perception of Gynecologic Clinical Trial Participation in the Deep South. Poster presentation at the Society of Gynecologic Oncology Annual Meeting on Women's Cancer. Toronto, Canada.

C.J. Mesa, S. Yadlapati, A.G. Chapple, S. Mahato, M.E. Guevara. The Use and Safety of Rituximab in Connective Tissue Disease associated Interstitial Lung Disease. American College of Rheumatology (ACR) 2019, Atlanta Georgia.

Brett Salomon, Andrew Chapple Ph.D., Vinod Dasa M.D., Peter Krause M.D. Factors Influencing Complication Rates After Total Hip and Knee Arthroplasty in Hepatitis C Positive and Liver Disease Patients. 2020 Louisiana Orthopedic Association.

C.J. Mesa, S. Yadlapati, A.G. Chapple, S. Mahato, M.E. Guevara. Sunscreen Knowledge Amongst Rheumatologist: Finding the Gap. 22nd Pan-American Congress of Rheumatology (PANLAR) 2020

M. Brown, A.G. Chapple, N. Nair, et al. Enhanced Recovery After Surgery (ERAS) Implementation in Gynecologic Surgery Patients in a Medically Underserved Population. 2020 LSU Quality Improvement Forum. **\*People's Choice award winner\***

R. Gilbert, A.G. Chapple, K. Boggs, E. Sutton. Marijuana Use in Pregnancy and the Risk of Preterm Birth. 2020 Central Association of Obstetricians and Gynecologists (CAOG) Meeting. **\*Dr. Jack A. Pritchard Memorial Paper award winner\***

#### FUNDED GRANTS

OREF - JRGOS Health Disparities Research in Orthopedics: Jennifer **Simkin (PI)**  
07/01/20 - 06/30/21

Title: Integrating clinical, social and biological data to assess TKA risk  
Role: CO-PI and Statistician  
Effort: 0%

#### SOFTWARE AVAILABLE ON CRAN

**BayesPieceHazSelect:** Bayesian variable selection on covariates in a cox-like hazard with a piecewise exponential baseline hazard.  
<https://cran.r-project.org/web/packages/BayesPieceHazSelect/BayesPieceHazSelect.pdf>

**BayesPiecewiseICAR:** Fits a piecewise exponential model to survival data.  
<https://cran.r-project.org/web/packages/BayesPiecewiseICAR/BayesPiecewiseICAR.pdf>

**SimSCRPiecewise:** Simulates survival data from piecewise hazards.  
<https://cran.r-project.org/web/packages/SimSCRPiecewise/SimSCRPiecewise.pdf>

**SCRSELECT:** Implements the SVSS and DIC-Tau\_g procedures from the paper: Bayesian variable selection for a semi-competing risks model with three hazard functions. <https://cran.r-project.org/web/packages/SCRSELECT/SCRSELECT.pdf>

**SubTite:** Implements Sub-TITE dose finding in phase I clinical trials and provides functions for simulating these trials.  
<https://cran.r-project.org/web/packages/SubTite/SubTite.pdf>

**PieceExplntensity:** Bayesian reversible jump MCMC for a marked Poisson point process.  
<https://cran.r-project.org/web/packages/PieceExplntensity/PieceExplntensity.pdf>

**Phase123:** Contains functions for implementing and simulating Phase I-II/III clinical trials.  
<https://cran.r-project.org/web/packages/Phase123/Phase123.pdf>

**Phase12Compare:** Contains functions for implementing and simulating SPSO and Efftox phase 12 trials with utility or a tradeoff contour-based objective function.

<https://cran.r-project.org/web/packages/Phase12Compare/Phase12Compare.pdf>

**BayesReversePLLH:** Implements the Bayesian reversible jump piecewise exponential (PEH) and piecewise linear log-hazard (PLLH) models described in Chapple, Peak and Hemal (2020).

<https://cran.r-project.org/web/packages/BayesReversePLLH/BayesReversePLLH.pdf>

#### TEACHING EXPERIENCE

Louisiana State University School of Public Health, New Orleans, LA

**Assistant Professor**

**2018-present**

Courses Taught/Teaching: BIOS 6318-Nonparametric Statistics; BIOS 6310- Applied Biostatistics; BIOS 6210 – Categorical Data Analysis; BIOS 6300 – Statistical Computing.

Rice University, Houston, TX

**Teaching Assistant**

**2014-2016**

I taught introductory labs on using R for homework assignment and gave bi-weekly review lectures for an introductory probability and statistics class. I wrote and graded assignments for an applied stochastic processes class on generating functions.

Louisiana State University, Baton Rouge, LA

**Lab Lecturer**

**2012-2014**

I taught 8 undergraduate labs on how to use SAS enterprise guide. Held problem sessions for undergraduate students. Taught one graduate lab on how to use SAS to perform analyses learned in class, writing and grading each lab assignment.

#### RELATED EXPERIENCE

Louisiana State University Health Science Center, New Orleans, LA

**Assistant Professor**

**2018 – present**

I research survival analysis and clinical trials and teach lectures to PhD students in Biostatistics.

The Bioinformatics CRO

**Biostatistical Consultant**

**2019-present**

Perform data analysis and plan studies for clients of the Bioinformatics CRO.

JAMA Network Open

**Statistical Reviewer**

**2019-present**

Review statistical protocol and methods used in papers submitted to the JAMA Network Open Journal

MD Anderson, Houston, TX

**Trainee**

**2015 – 2018**

I performed statistical research for medical applications under the supervision of Dr. Peter Thall. First we worked with Dr. Steven Lin on one application and one methodology paper involving semi-competing risks data. I took Dr. Thall's Bayesian clinical trial course in spring 2016, afterwards we developed two novel clinical trials, both of which have been published.

The Daily Reveille, Baton Rouge, LA

**Sports Writer**

**Fall 2011**

I covered all LSU fall sports but was specifically the beat writer for cross country and track. I pitched several story ideas to my managers each week, interviewed relevant sources, and wrote articles in a timely manner for print.

Volunteers in Public Schools, Baton Rouge, LA

**Math Tutor**

**2009 – 2011**

I tutored children in second and third grade who had fallen behind in math, developing advisor-mentee friendships seeing major improvements in their ability and confidence.

Episcopal High School, Baton Rouge, LA

**Middle School Track Coach**

**2009 – 2010**

I was the head boys coach for two middle school teams but particularly worked with quarter milers. I developed workouts for each day, taught relay exchanges, and encouraged the kids to succeed in track and life.

#### RELEVANT SKILLS

Coding proficiency in R and C++. Experience using clusters with putty and bash scripts. Proficiency using programs for developing clinical trials including East and several applications found on MDAnderson's website. Experience editing Wikipedia content. Proficiency in Excel and other Microsoft office programs.

#### MEMBERSHIPS

Society of Clinical Trials

#### INVITED AND CONTRIBUTED TALKS

-MD Anderson Cancer Center (June, 2017): Bayesian variable selection for a semi-competing risks model with three hazard functions.

-MD Anderson Cancer Center (June, 2018): A Hybrid Phase I-II/III Clinical Trial Design Allowing Dose Re-Optimization in Phase III.

-Louisiana Chapter of the ASA (November, 2018). Subgroup-specific dose finding in phase I clinical trials based on time to toxicity allowing adaptive subgroup combination.

-ENAR Annual Meeting (March, 2019): Bayesian variable selection for a semi-competing risks model with three hazard functions.

-Society of Clinical Trials Annual Meeting (May, 2019): A Hybrid Phase I-II/III Clinical Trial Design Allowing Dose Re-Optimization in Phase III.

-Bayesian Causal Inference Workshop (June, 2019). Subgroup-specific dose finding in phase I clinical trials based on time to toxicity allowing adaptive subgroup combination.

-University of Louisiana - Lafayette (October, 2019): A Hybrid Phase I-II/III Clinical Trial Design Allowing Dose Re-Optimization in Phase III.

-iBRIGHT conference at MDAnderson (November, 2019): Subgroup-specific dose finding in phase I clinical trials based on time to toxicity allowing adaptive subgroup combination.

-ENAR Annual Meeting (March, 2020): Subgroup-specific dose finding in phase I clinical trials based on time to toxicity allowing adaptive subgroup combination. Virtual.

-International Biometrics Conference (July 2020): A Hybrid Phase I-II/III Clinical Trial Design Allowing Dose Re-Optimization in Phase III. Best Biometrics paper showcase 2019. Virtual.

-Joint Statistical Meetings - JSM (July, 2020): Subgroup-specific dose finding in phase I clinical trials based on time to toxicity allowing adaptive subgroup combination. Virtual.