

# KOLE REDDIG

## Contact Information

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## Education

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Tepper School of Business, Carnegie Mellon University	Pittsburgh, PA
Ph.D. Economics (Minor in Marketing)	2020 (expected)
Tepper School of Business, Carnegie Mellon University	Pittsburgh, PA
M.S. Economics	2017
George Mason University	Fairfax, VA
B.S. Economics and Mathematics	2014
<i>summa cum laude</i> , Honors in Mathematics	

## Fields of Interest

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Health Economics, Industrial Organization, and Applied Microeconomics.

## References

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Prof. Martin Gaynor (co-chair)  
H. John Heinz III College  
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Prof. Maryam Saeedi (co-chair)  
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Prof. Rebecca Lessem  
Tepper School of Business  
Carnegie Mellon University  
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## Job Market Paper

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“Designing Contracts for Multitasking Groups: A Structural Model of Accountable Care Organizations.” ([Link](#))

*Abstract:* Contract and incentive design is used by firms, policymakers, and many others to encourage desired behavior in a variety of settings. In this paper, I estimate a model structural to design contracts for an incentive program where agents face a tradeoff between multiple tasks, free-ride on each other, and have the option to drop out if payment is not sufficiently generous. The setting, which involves 11 million people and \$100 billion in healthcare expenditure each year, is Medicare’s Accountable Care Organizations (ACOs). ACOs are groups of healthcare providers that receive incentive pay from Medicare for spending below a cost target on shared patients. In order to find the contracts between Medicare and ACOs that maximize the money saved by the incentive program while accounting for free-riding, the tradeoff between reducing expenditure and quality of care, and voluntary participation, I build and estimate a two-stage structural model of ACOs. Healthcare providers first choose which, if any, ACO to join based on the income they expect to earn. Next, given participation in an ACO, providers strategically choose effort to put towards quality of care and reducing expenditure in order to maximize their own payoff. The model is estimated with public ACO-level performance and participation data. I find that free-riding within ACOs and the tradeoff between decreasing expenditure and improving quality has a large impact on the contract Medicare should implement to maximize the monetary savings of the incentive program. Counterfactual analysis shows existing contracts between Medicare and ACOs are too generous, and when the savings-maximizing contract is used, Medicare saves \$100 million more per year. If Medicare also imposes financial penalties on ACOs that spend too much, cost-savings increases by \$730 million per year, without a significant change in participation, though ACO quality of care decreases by two standard deviations. The final counterfactual shows free-riding within ACOs decreases program savings by \$1 billion per year.

## Other Working Papers

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“Spillovers between Medicare and Medicaid: Evidence from the Supply-Side and Payment Parity”

## Conference Presentations

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2019: ASHEcon (Washington D.C.), IIOC Rising Stars Session (Boston), H2D2 Research Day (University of Michigan)

2018: Southeastern Health Economics Study Group Conference (Atlanta)

## Teaching Experience

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### *Instructor*

Regression Analysis (Undergraduate), Summer 2017

Overall teaching evaluation: 4.7/5.0 (100% of students responding)

### *Teaching Assistant*

Regression Analysis (Undergraduate), Spring 2016, Fall 2016, Fall 2017, Fall 2018, Fall 2019  
Statistical Decision Making (MBA), Spring 2017, Spring 2018, Spring 2019

Economic Principles of Policy Analysis (Masters), Spring 2018  
Microeconomics I (Ph.D.), Fall 2015, Fall 2016  
Microeconomics II (Ph.D.), Fall 2015

### **Other Experience**

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Research Assistant for Prof. Rebecca Lessem, Spring 2019  
Research Assistant for Prof. Karam Kang, Spring 2016, Spring 2017

### **Selected Awards and Honors**

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William Larimer Mellon Fellowship	2014-2018
Tepper School of Business, Carnegie Mellon University	
Phi Beta Kappa	2014
George Mason University	
First Place, Physical Sciences Undergraduate Research Colloquium	2014
College of Science, George Mason University	
Outstanding Academic Achievement Award	2014
Department of Economics, George Mason University	

### **Other**

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*Computer Skills:* Matlab, Stata, Python, R, Eviews, SAS, L<sup>A</sup>T<sub>E</sub>X, Microsoft Office  
*Citizenship:* United States