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### Improving care of vulnerable elders through computerized clinical decision support

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# Curriculum vitae and Portfolio

## Curriculum vitae

Stephanie Medlock was born in Kansas City, Missouri, in 1976. She studied agriculture at the University of Missouri for two years, after which she was accepted into the College of Veterinary Medicine, where she attained a degree of Doctorate of Veterinary Medicine in the year 2000. After six years of working as a general practitioner at the North Bend Animal Clinic in Washington State, she moved to the Netherlands. After completing the pre-master program in 2007, she entered the Master's program in Medical Informatics at the Academic Medical Center of the University of Amsterdam, where she graduated with honors in 2009. In September 2009, she started her PhD research on the Improving Care of Vulnerable Elders (ICOVE) project. In addition to working on ICOVE, Stephanie served on the student editorial board of *Methods of Information in Medicine*. Stephanie has also taken on teaching and organizational duties within the department, including supervising Master's students in their scientific research projects, organizing the research meetings for PhD students, developing Health Informatics e-Learning modules, leading the Master's course "Knowledge representation and reasoning in medicine", and coordinating the pre-master program to help other students from different backgrounds join the Medical Informatics Master's program.

## Portfolio

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Name PhD Student: Stephanie Kay Medlock  
 PhD Period: September 2009 to December 2015  
 Promoters: A. Abu-Hanna, S.E.J.A. de Rooij; Co-promoter: S. Eslami

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### PhD Training and courses

|  | <i>year</i> | <i>workload<br/>(ECTS)</i> |
|--|-------------|----------------------------|
| AMC World of Science                   | 2009        | 0.7                        |
| NPO Masterclass Ouderen en ICT         | 2011        | 0.3                        |
| NPO Masterclass Implementatie          | 2011        | 0.3                        |
| NPO Masterclass Ouderenparticipatie    | 2011        | 0.3                        |
| Workshop Coachen en begeleiden         | 2014        | 0.2                        |
| Vervolg Workshop Coachen en begeleiden | 2015        | 0.2                        |
| Educational Skills training            | 2015        | 0.4                        |

### Teaching

|  | <i>year</i> | <i>workload<br/>(ECTS)</i> |
|--|-------------|----------------------------|
| Supervision Master SRPs (4)                                  | 2014-15     | 8                          |
| Supervision Master internships (4)                           | 2013-15     | 4                          |
| Coordinating onderzoeksoverleg                               | 2014-15     | 1                          |
| Coordinating pre-master                                      | 2015        | 7                          |
| Knowledge representation and reasoning in medicine           | 2014        | 1                          |
| Inleiding Medische Informatiekunde: Beslissingsondersteuning | 2014        | 0.5                        |
| Health Informatics e-Learning Decision Support               | 2014-15     | 8                          |
| Health Informatics e-Learning eHealth                        | 2014-15     | 0.5                        |
| Medische informatica in geneeskunde: kwaliteitsindicatoren   | 2014-15     | 0.5                        |

### Conferences and Presentations

|   | <i>year</i> | <i>workload<br/>(ECTS)</i> |
|---|-------------|----------------------------|
| International Forum on Quality and Safety<br><i>poster presentation</i>   | 2011        | 1<br>0.5                   |
| European Union Geriatric Medicine Society<br><i>poster presentation</i>   | 2012        | 1<br>0.5                   |
| Medical Informatics Europe<br><i>oral presentation</i>  | 2012        | 1<br>0.5                   |
| MedInfo<br><i>oral presentation</i>   | 2013        | 1<br>0.5                   |
| EFMI Special Topics Decision Support<br><i>oral presentation</i><br><i>workshop</i>                                 | 2013        | 1<br>0.5<br>0.5            |
| IEEE Health Informatics<br><i>oral presentation</i>   | 2014        | 1<br>0.5                   |
| <b>Other</b>  |             |                            |
| Student Editorial Board for Methods of Information in<br>Medicine   | 2010-11     | 1                          |
| OpenElectronicsLab<br>( <a href="https://github.com/OpenElectronicsLab">https://github.com/OpenElectronicsLab</a> ) | 2011-15     | 34                         |

## List of Publications

- [1] Medlock S, Eslami S, Askari M, Arts DL, Sent D, de Rooij SE, Abu-Hanna A. Health information-seeking behavior of seniors who use the Internet: a survey. *J. Med. Internet Res.* 2015; 17.1:e10.
- [2] Medlock S, Eslami S, Askari M, Sent D, de Rooij SE, Abu-Hanna A. The consequences of seniors seeking health information using the internet and other sources. *Stud Health Technol Inform* 2013; 192:457–460.
- [3] Medlock S, Eslami S, Askari M, Taherzadeh Z, Opondo D, de Rooij SE, Abu-Hanna A. Co-prescription of gastroprotective agents and their efficacy in elderly patients taking nonsteroidal anti-inflammatory drugs: a systematic review of observational studies. *Clin. Gastroenterol. Hepatol.* 2013; 11.10:1259–1269.
- [4] Medlock S, Eslami S, Askari M, Brouwer HJ, van Weert HC, de Rooij SE, Abu-Hanna A. Attitudes and experience of Dutch general practitioners regarding computerized clinical decision support. *Stud Health Technol Inform* 2013; 186:56–60.
- [5] Medlock S, Eslami S, Opondo D, Askari M, de Rooij S, Abu-Hanna A. Application of the logical elements rule method for formalization of clinical rules: case study of ACOVE-NLI. *Stud Health Technol Inform* 2012; 180:421–426.
- [6] Medlock S, Ravelli AC, Tamminga P, Mol BW, Abu-Hanna A. Prediction of mortality in very premature infants: a systematic review of prediction models. *PLoS ONE* 2011; 6.9:e23441.
- [7] Medlock S, Eslami S, Askari M, van Lieshout EJ, Dongelmans DA, Abu-Hanna A. Improved communication in post-ICU care by improving writing of ICU discharge letters: a longitudinal before-after study. *BMJ Qual Saf* 2011; 20.11:967–973.
- [8] Medlock S, Opondo D, Eslami S, Askari M, Wierenga P, de Rooij SE, Abu-Hanna A. LERM (Logical Elements Rule Method): a method for assessing and formalizing clinical rules for decision support. *Int J Med Inform* 2011; 80.4:286–295.
- [9] Medlock S, Eslami S, Askari M, de Rooij S, Abu-Hanna A. “VMBI Jaarboek 2010”. Rotterdam: VMBI, 2010. Chap. Improving Care Of Vulnerable Elders (ICOVE): the road from quality indicators to quality improvement.
- [10] Askari M, Eslami S, van Rijn M, Medlock S, van Charante EP, van der Velde N, de Rooij SE, Abu-Hanna A. Assessment of the quality of fall detection and management in primary care in the Netherlands based on the ACOVE quality indicators. *Osteoporos Int* 2015.
- [11] Askari M, Eslami S, Medlock S, de Rooij SE, Abu-Hanna A. Fall-related Information seeking behavior of seniors on the web. *Stud Health Technol Inform* 2014; 205:647–651.
- [12] Eslami S, Askari M, Medlock S, Arts DL, Wyatt JC, van Weert HC, de Rooij SE, Abu-Hanna A. From assessment to improvement of elderly care in general practice using decision support to increase adherence to ACOVE quality indicators: study protocol for randomized control trial. *Trials* 2014; 15:81.



## In preparation

- [1] Medlock S, Wyatt J, Patel V, Shortliffe E, Abu-Hanna A. Modeling information flows in clinical decision-support systems: A first step towards understanding CDSS effectiveness. *J Am Med Inform Assoc*. In process.
- [2] Medlock S, Eslami S, Askari M, Arts D, van de Glind E, Brouwer H, van Weert H, de Rooij S, Abu-Hanna A. For which clinical rules do doctors want decision support, and why? A survey of Dutch general practitioners. In preparation.
- [3] Medlock S, Parlevliet J, Eslami S, Askari M, Arts D, Sent D, Hoekstra J, de Rooij S, Abu-Hanna A. Improving the number and timeliness of letters sent from the hospital outpatient clinic to the general practitioner: a pair-randomized controlled trial. In preparation.
- [4] Medlock S, Eslami S, Lagaay A, Askari M, Arts D, de Rooij S, Abu-Hanna A. From assessment to improvement of the quality of care for elderly patients in internal medicine: Protocol for an interventional time series study. In preparation.
- [5] Aslani A, Tara F, Ghalichi L, Medlock S, Abu-Hanna A, Eslami S. Iranian women's information seeking during pregnancy: where, when, what? In preparation.
- [6] Arts DL, Voncken AG, Medlock S, Abu-Hanna A, van Weert HC. Reasons for intentional guideline non-adherence: a systematic review. In preparation.

# Dankwoord

Although it is my name on the cover of this book, a more true attribution of the work that made this thesis possible would look something like this:



Although this passage appears at the end of this book, my promoters and co-promoter, Ameen, Sophia, and Saeid, were there from the beginning. It was their hard work that allowed me to start on this research, removed obstacles and provided guidance along the way, and made a place for me to continue what we've started. It is no exaggeration to say that this work would not have been possible without you.

Ameen, my sincerest thanks for everything you've done in this research. I hope you know that you've earned my deepest respect for your talent, integrity, and commitment as a researcher and teacher. Whether it was navigating the bureaucracy of the AMC or untangling a messy R script, you've always been there to help. You always find the time to help when it's needed, even when I know very well that that time is not easy to come by.

Sophia, you have played the role of both clinical expert and remover of obstacles throughout this project. Your contribution as a geriatrician has been invaluable, but your involvement has gone well beyond that of simply providing the clinical

perspective. It has been an honor and a pleasure to work together.

Saeid, you have always welcomed collaboration, and I appreciate that you looked for and found ways where our strengths as researchers could complement each other. I think this project is stronger for that collaboration, and I look forward to working together in the future.

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There are many others who have given me a leg up or helping hand at the right moment. Thanks to all of you. This book is not the work of one, but of all of us.