

Curriculum Vitae

Dr. med. Jörg-Michael Sigle

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Education

Dr. med. (Academic Title), Magna cum Laude, University of Ulm (1998)

M.D. (German State Examination), University of Ulm, Germany (1997)

Medical licensures

Unrestricted license to practice medicine (German Approbation als Arzt, 2001)

United States Medical Licensing Examination (USMLE) Step 1 (1995) and Step 2 (2002)

Professional experience

2014 - 2015 Clinical residency with Dr. Markus Klink, Reha Chrischona.

2004 Clinical residency at the community hospital of Duderstadt, Dept. of Internal Medicine, with Prof. Heinz Hartmann. Cancellation due to the breakdown of my parents' business.

2003 - 2005 Post graduate training at the University of Göttingen, Dept. of Family Practice, with Prof. Michael Kochen. Development of an interactive electronic guideline and an online student feedback system, aggregation and analysis of data from practice IT systems, design of a research project to advance infrastructure, quality oriented work and documentation culture in medical practices. Acquisition of major research grants by the German Ministry of Education and Research (BMBF).

2001 - 2002 AiP and clinical residency with Dr. Wolfgang Streibl, General Practitioner, Knittlingen.

1997 - 1998 Arzt im Praktikum (AiP) and post graduate training at the University of Ulm, Dept. of Psychology, Clinical Economics group, with Prof. Franz Porzsolt, Hematologist and Oncologist. Conception of EBM courses and teaching in Germany and Switzerland.

Since 1993 Self-employed consulting and project work in outcome measurement, quality assurance and Evidence-Based Medicine (EBM) and IT: Scientific consulting, programming and support for QL-Recorder application projects in clinical studies and routine care. Production of bi-directional xDT and HL7 interfaces, database and web integration, data and process visualization. Contributions to the OpenSource medical practice software Elexis.

1983 - 1997 For the local newspaper run by my parents: Photography and office work. For AR\$T EDV, Knittlingen: Graphics design, setup and administration of practice networks systems, software development, including TSR programs to operate PCs from a digitizer or other sources, interfaces to various medical devices, and a small number of hardware designs.

Honors and awards

Lilly Quality of Life Prize (2009)

Poster Prize on the DEGAM annual meeting (2006)

Military service (Wehrpflicht)

Obergefreiter, specialist for wide range radio transmissions, driver's license class II (1989 - 1990)

Memberships in professional societies and workgroups

AAAI - Association for the Advancement of Artificial Intelligence (2012 - 2013), www.aaai.org

AIO - AG Internistische Onkologie der Deutschen Krebsgesellschaft (since 2009), www.aio-portal.de

EGPRN - European General Practitioners' Research Network (2004 - 2005), www.egprn.org

DEGAM - Deutsche Gesellschaft für Allgemeinmedizin und Familienmedizin (since 2003), www.degam.de

QMS - Qualitätsring Medizinische Software (since 2001), www.qms-de.org

EORTC Study Group on Quality of Life (since 1993), www.eortc.be/qo1

Ärzttekammer Baden-Württemberg, Ärztekammer Niedersachsen, Germany (1997 - 2009)

Industrie- und Handelskammer Ulm, Industrie- und Handelskammer Pforzheim, Germany (1993 - 2009)

Additional courses and certificates (selected examples)

Online course: Computer Science 373: Programming a Robotic Car, www.udacity.com

Prof. Sebastian Thrun (2012)

Result: With Highest Distinction¹

Online course: Introduction to Computer Science 101: Building a Search Engine, www.udacity.com

Prof. David Evans and Prof. Sebastian Thrun (2012)

Result: With Highest Distinction²

Online course: Introduction to Artificial Intelligence, www.ai-class.org

Prof. Sebastian Thrun und Prof. Peter Norvig, Stanford Engineering (2011)

Score: 100% (160.000 enrolled from all over the world, 23.000 completed the course, 248 with 100%)³

Online course: Machine Learning, www.ml-class.org

Prof. Andrew Ng, Stanford University Artificial Intelligence Lab (2011)

Score: 100% (104.000 enrolled, 13.000 completed)

Online course: Introduction to Databases, www.db-class.org

Prof. Jenifer Widom, Stanford Engineering (2011)

Score: 95% (92.000 enrolled, 7.000 completed, my result is among the top 5% of those who completed)

Seminar on GCP (Good Clinical Practice) for investigators and study nurses. Workgroup Medical Oncology (AIO) of the German Cancer Society (DKG) and KKS / Charité Berlin (2009)

Course in emergency medicine (Parts A-D, 80 hours) as recommended by the Sektion Rettungswesen der DIVI for the qualification of physicians on emergency rescue service and the Bundesärztekammer. Center for Anesthesiology, Emergency Medicine and Intensive Care of the University of Göttingen (2004)

Course Quality Management for Physicians (Level I, 40 hours) according to the Curriculum of the Bundesärztekammer. Dpts. of Transfusion Medicine and Medical Information Technology of the University Clinic of Göttingen (2004)

Seminar "Cardio-circulatory emergency situations" with exercises and case simulations according to standards of the European Resuscitation Council and the Bundesärztekammer. TrainMed, Karlsruhe (2002)

6th UK Workshop in Teaching Evidence-Based Medicine, Prof. David Sackett. NHS R&D Centre for Evidence-Based Medicine, Nuffield Dpt. of Clinical Medicine, University of Oxford, England (1997)

Seminar Physics I. University of Ulm (1997)

Language skills

German and English: business fluent. French: basic command. Grosses Latinum. Russian: basic knowledge. Completion of international projects using up to 19 languages and Greek, Cyrillic or Chinese characters.

Formal languages: Broad experience; ability to acquire working knowledge for new environments fast.

¹Only semiquantitative results were released; the numeric score should have been 100% according to course rules.

²Only semiquantitative results were released; the numeric score should have been 100% according to course rules.

³www.nytimes.com/2012/03/05/education/moocs-large-courses-open-to-all-topple-campus-walls.html

Scientific publications and contributions to books (selected examples)

1. Rogausch A, Sigle JM, Seibert AJ, Thüning S, Kochen MM, Himmel W: Feasibility and acceptance of electronic quality of life assessment in general practice: an implementation study. *Health and Quality of Life Outcomes*. 7:51 (2009). PMID: 19493355
2. Chen TH, Li L, Sigle JM, Du YP, Wang HM, Lei J: Crossover randomized trial of the electronic version of the Chinese SF-36. *J Zhejiang Univ Sci B* 8:604-8 (2007). PMID: 17657865
3. Porzsolt F, Stengel D, Sigle J, Eisemann M: Von "Tischlern" und "Bettlern": Sie sollten voneinander lernen. *Dtsch Med Wochenschr* 18:1000-3 (2007). PMID: 17457785
[Of desk-economists and doctors at the bedside: they should learn from each other.]
4. Heidenreich R, Himmel W, Bockmann H, Hummers-Pradier E, Kochen MM, Niebling W, Rogausch A, Sigle J, Wetzell D, Scheidt-Nave C: Elektronische Erfassung von medizinischen Daten in deutschen Hausarztpraxen: Ein Telefon-Survey. *Z Ärztl Fortbild Qualitätssich*. 99(9):573-80 (2005). PMID: 16398199 [Electronic recording of medical data in German general practices: a telephone survey.]
5. Himmel W, Kühne I, Chenot JF, Scheer N, Primas I, Sigle J: Blockpraktikum Allgemeinmedizin: Evaluation des studentischen Unterrichts in Allgemeinpraxen. *Gesundheitswesen*; 66(7):457-61 (2004); PMID: 15314738
[Electronic evaluation of students' practical training with family practitioners.]
6. Porzsolt F, Kojer M, Schmidl M, Greimel ER, Sigle J, Richter J, Eisemann M: A new instrument to describe indicators of well-being in old-old patients with severe dementia - the Vienna List. *Health and Quality of Life Outcomes*, 2:10 (2004); PMID: 14975057
7. Sigle J, Wilhelm HJ: Medizinisches Qualitätsmanagement. In: Lehman T, Meyer zu Bexten E (Hrsg.): *Handbuch der medizinischen Informatik*. Carl Hanser Verlag, ISBN 3-446-21589-1 (2002)
[Medical Quality Management. In: Textbook of Medical Information Technology.]
8. Porzsolt F, Sigle J: Was bringt die Behandlung? Interpretation von Studienergebnissen zu therapeutischen Verfahren. In: Perleth M, Antes G (Hrsg.): *Evidenz-basierte Medizin, Wissenschaft im Praxisalltag*, MMV Medizin Verlag München, ISBN 3-8208-1333-0, 37-47 (1998)
[What is the benefit of a treatment? Interpretation of clinical studies on therapeutic methods. In: Evidence-Based Medicine, science in daily medical practice.]
9. Sigle J, Porzsolt F: When will we have electronic patient files?, *ESPO Newsletter* 11, 7-10 (1996)
10. Sigle JM, Porzsolt F: Practical aspects of quality-of-life measurement: design and feasibility study of the quality-of-life recorder and the standardized measurement of quality of life in an out-patient clinic, *Cancer Treatment Reviews* 22 Suppl. A: 75-89 (1996); PMID: 8625353
11. Schmidt H, Merkel D, Koehler M, Flechtner HH, Sigle J, Klinge B, Jordan K, Vordermark D, Landenberger M, Jahn P: PRO-ONKO - selection of patient-reported outcome assessments for the clinical use in cancer patients - a mixed-method multicenter cross-sectional exploratory study. *Support Care Cancer* 24:2503-2512 (2016); PMID: 26676238

Additional publications for which I have not been named as co-author, but have provided completely prepared project specific configurations of the QL-Recorder, including the adoption or creation of patient questionnaires in a working and feasible electronic form, computation of results and their presentation in a way that clinicians can easily understand, have appeared e.g. in *JClinOncol*, *BrJCancer*, *AnnOncol*. They include routine assessments in thousands of patients over multiple years.

See: <http://www.jsigle.com/cv> and <http://www.ql-recorder.com/document>

Peer reviewer for the journals *QualLifeRes*, *BrJCancer*, and *ZFA*.

Doctoral, master's and diploma theses with applications of my technology

1. Mautner E: Schwangerschaft und Geburt - Medizinische und psychosoziale Einflussfaktoren auf die Lebensqualität und Befindlichkeit. Universität Graz (2008)
[Pregnancy and birth - medical and psychosocial factors influencing quality of life and wellbeing.]
The poster Mautner E et al.: Pregnancy and Birth - The impact of medical and psychosocial factors on quality of life and wellbeing. International Society for Quality of Life Research Annual Conference, 25. Oktober 2008, Montevideo - earned the New Investigator Award of the conference.

2. Preuss C: Patientenbefragung zur Lebensqualität und Behandlungszufriedenheit für Disease Management Programme bei Diabetes mellitus: Entwicklung von Werkzeugen und Machbarkeitsstudie. Universität Heidelberg (2006) [Patient assessment on Quality-of-Life and satisfaction with care for disease management programs for diabetes mellitus. Development of tools and feasibility study.] *Schwank-Prize 2007 for the "Best doctoral thesis of 2006" of the Landesärztekammer Nordbaden.*
3. Thüring S: Kommunikation von Ergebnissen individueller Lebensqualitätsmessungen in der Hausarztpraxis. Medizinische Hochschule Hannover (2006) [Communication of results of individual Quality-of-Life measurements in family practice.]
4. Chen, T: The effect of Health-Related Quality of Life (HRQoL) on Health Service Utilization of patients with chronic disease. University of Zhejiang, China (2005)
5. Höhman D: Klinische Signifikanz von EORTC QLQ-C30 Daten für die Prognose von Patienten mit Mamma-, Pankreas-, Ovarial- und kolorektalem Karzinom. Universität Witten-Herdecke (2000) [Clinical significance of EORTC QLQ-C30 data for the prognosis of patients with breast, pancreatic, ovarian and colorectal carcinomas.]
6. Braun R: LQ-KID: Entwicklung einer computerbasierten Methode zur Evaluation der Lebensqualität bei chronisch kranken Kindern und Jugendlichen. Universität Ulm. [Development of a computer based method to evaluate Quality-of-Life in chronically ill children and adolescents.] (A feasibility-study with the QL-Recorder in another setting.) *Follow up work by the same group won the Lilly Quality of Life Prize 2002.*
7. Schimitzek C: Patientenpräferenzen - Einsatz des LQ-Recorders zur direkten Patientenbefragung und zur einfachen Erfassung bereits vorher erhobener Papierfragebögen. Universität Ulm. [Patient preferences - using the QL-Recorder to directly administer electronic questionnaires to patients and to conveniently score previously collected paper questionnaires.]
8. Holch S: Einsatz des LQ-Recorders bei stationären Patienten. Universität Ulm (2000) [Using the QL-Recorder in inpatients.]
9. Gebhard U: Grenzen der LQ-Messung. Einsatz des LQ-Recorders und von Fragebögen bei Patienten der Aufnahmestation. Universität Ulm, (1997) [Limitations of Quality-of-Life measurement. Using the QL-Recorder and paper questionnaires in the admission and emergency ward.]
10. Sigle J: Praktische Aspekte der Lebensqualitäts-Messung: Die standardisierte Messung der Lebensqualität bei Ambulanzpatienten mit einem elektronischen Lebensqualitäts-Recorder, Universität Ulm (1996) [Practical aspects of Quality-of-Life Measurement: The standardized measurement of Quality-of-Life in outpatients using an electronic Quality-of-Life-Recorder.] *Development of the QL-Recorder, routine QL measurement in more than 1'100 outpatients, resulting in almost complete representation of a defined patient group, patient compliance around 96%, completeness of data exceeding 99.9%, age distribution like the German population up to 92 years.*

Contributions to scientific meetings (selected examples)

1. Lecture: Sigle J: Elektronische Patientenfragebögen auf Basis des Lebensqualitäts-Recorders. 23. Kongress der Deutschen Kontinenz Gesellschaft, Köln (2011) [Electronic patient questionnaires based upon the Quality-of-Life-Recorder.]
2. Lecture (by CT): Chen T, Li L, Sigle J, Du Y: Feasibility and reliability of the electronic version of Chinese SF-36 administered using the Quality-of-Life-Recorder. 2007 International Society for Quality of Life (ISOQOL) Research meeting abstracts. Quality of Life Research, Suppl. A-86 (2007)
3. Lecture: Sigle J, Surhoff M, Kochen MM et al.: Entwicklung einer universellen Plattform für elektronische Leitlinien und Adaptation der DEGAM Leitlinie #1: Brennen beim Wasserlassen. 39. Kongress der Deutschen Gesellschaft für Allgemein- und Familienmedizin, Potsdam (2005) [A universal platform for electronic guidelines and adoption of DEGAM guideline #1: Painful urination.]
4. Lecture: Sigle J, Scheidt-Nave C et al.: Developing an Infrastructure to use Electronic Patient Records for Research in German General Practice: The MedViP Study. European General Practitioners' Network (EGPRN) Congress, Gozo/Malta (2004)

5. Poster: Höhmann D, Hager ED, Sigle J: Prognostic significance of EORTC QLQ-C30 data for patients with pancreatic cancer. Spring meeting of the EORTC-GITCCG: "Prognostic Factors in Colorectal Cancer: Impact of Tumor Biology and Treatment Quality", Ulm (2001)
6. Lecture: Sigle J, Porzolt F: Standardized assessment of quality of life in an out-patient clinic. II. Reisenburg Conference on Goals of Palliative Cancer Therapy, Günzburg (1996)

Other publications and media (selected examples)

1. Contributions to the OpenSource practice management software Elexis (2010 - 2015)
First examples available via: <http://www.jsigle.com/prog/elexis>
2. Contributions to requirements for the practice management software Res Medicinae / GNUmed.
Current version at: <http://resmedicinae.sourceforge.net/analysis> (ca. 2001)
3. Sigle J: Gesucht: Optimale Software - Marktübersicht und Anwenderbefragung zu Krankenhausinformationssystemen. ku-Special 16, 22-23 (1999)
[Wanted: Optimal software - Market survey on hospital information systems.]
4. Projektbericht und interaktives Modell zum Projekt "Digitales ArchivierungsZentrum Ulm" (1999)
[Project report and interactive model on a central digital archive for radiologic image data.]
I was asked to complete this business conception project and demonstrated qualitative and quantitative superiority of a distributed virtual architecture using commodity hardware on users' sites.
5. Thure von Uexküll: Placebo-Effekte in der Medizin. Aufzeichnung eines Seminars der AG Klinische Ökonomik für Studierende in der Schwarzwaldklinik (1999)
[Placebo effects in medicine. Video recording of a seminar for students with Thure von Uexküll.]
6. Personal homepage (pointing to various project related pages) (since 1996):
Current version at: <http://www.jsigle.com>
7. The Quality-of-Life-Recorder using AnyQuest for Windows -
A tool for electronic patient questionnaires (since 1996)
Current version at: <http://www ql-recorder.com>

Active participation in educational and other events (selected examples)

1. Wissenschaftliches Institut der Techniker Krankenkasse für Nutzen und Effizienz im Gesundheitswesen (WINEG, TK): [Existing unfavourable and missing favourable feedback loops in the healthcare system - modelling effects of discount agreements on costs, benefits, perception and behaviour of the insured, with regard to changing their health insurance provider.] Hamburg (2007)
2. Institut für Qualität und Wirtschaftlichkeit im Gesundheitswesen (IQWiG): [Presentation of the projects MedViP II / E and A1 that won grants by the BMBF: Improvement of infrastructure and quality oriented ways of working and routine measurement of Quality-of-Life using electronic questionnaires in family practices.] Köln (2005)
3. European School of Oncology: [ESO-D course on clinical oncology for physicians: Introduction to Evidence-Based Medicine. Lecture and workshops.] St. Gallen (2000)
4. University of Ulm: [1st Introductory course to Evidence-Based Medicine.] (1998)
5. CeBIT: The QL-Recorder is one of three research exhibits representing the University of Ulm (1998)
6. Wilsede-Course: "Klinisch-Ökonomische Bewertungsmethoden" (1997)
[Methods for clinico-economic assessment.]

Experience from international workgroups (selected examples)

1. European Network for Promoting the Health of Residents in Psychiatric and Social Care Institutions (HELPS): Psychotherapeutic questionnaires on the QL-Recorder in 11 languages (2010-2012)
2. Electronic Health Record Research Group (EGPRN):
Aggregation and analysis of routine data from medical practices (2004-2005)
3. Glaxo-Wellcome: eIBSQOL - Electronic patient questionnaires in 19 languages as added value service for a new drug (1999, 2000)
4. Royal Prince Alfred Hospital, Sydney: Internship in medical oncology and adoption of the QL-Recorder concept onto Pen-Computers upon invitation by Prof. Alan Coates (1996)
5. British Columbia Cancer Agency, Vancouver und National Cancer Institute of Canada, Kingston: Presentation of the original QL-Recorder upon invitation by Prof. David Osoba (1996)

Beyond a formalized CV

I have not pursued any standard career in medicine, in commercial enterprises, or as a professional researcher so far.

In contrast, I have mostly maintained formal independence, even while contributing to projects I was invited to. I have also preferred providing readily usable material on the web, or direct coaching for individuals or teams, over writing journal articles to collect “impact factor”. And more often than not, I have done this work without funding.

Since the end of my studies, I have envisioned enabling providers of medical care to routinely ask patients how they feel - *according to their own opinion*. The answers to be used in research, resource allocation, and daily practice. To better select from available actions, and to better assess their value. I think this might improve healthcare systems to become more problem- and outcome oriented, highly individualized, and still highly rational, more beneficial and still more efficient.

On that mission alone, I have created beyond 100'000 lines of code⁴ (which is actually deployed), used any level of programming environment from control registers to “4th generation” languages, produced lots of documentation, training material, project designs, spreadsheet models for scientific or business modelling, etc.

I have solved a number of problems in usable, reliable and efficient ways, where other vendors could reportedly just not be found to do the job or to say it was doable at all.

I have also visited the areas of analog and digital hardware hacks, business modelling, accounting, mathematical problems, 2D and 3D graphics, music, interfacing with medical devices and other hardware, computer usability by untrained, elderly or ill people, reliability, data conversion, aggregation in databases, analysis, statistics, system analysis, web design, web applications and security. And experienced interactions of people, conceived, lead or supported projects in their human environments, and learned about their underlying scientific or industrial backgrounds.

Since my days in school, I have provided teaching, usable forms of specialized know-how, problem solving abilities and personal support. This helped others in their learning, obtaining qualifications or getting their work done. It has also given me interesting input since then.

My formal CV reflects only fractions of that.

Some of the Quality-of-Life-Recorder related work is available here:

<http://www.ql-recorder.com>

Examples from my programming or electronic experience, and other activities, are available here:

<http://www.jsigle.com/prog>

<http://www.jsigle.com/prog/cmi>

<http://www.jsigle.com/prog/elexis>

<http://www.jsigle.com>

I've also been active in photography and filming, practiced medicine, malpracticed music, woodworking etc.

Upon request I can provide additional indicators of creativity, communicative and organizational skills, as well as widespread interests - from toy problems to public matters.

Personal recommendations

These are available upon individual request.

⁴I am perfectly aware that a high number of lines of code is not a good sign per se, and neither of ingenuity. But even with lots of redundancy and other anti-patterns, and especially with the added support material, this might be as heavy as a number of published journal articles. Also note that medical or social sciences journals - and their readership - apparently do appreciate “clinical” or “validation studies” more easily than announcements of new tools. [...]