

Aktuelle Trends in der Versorgungsforschung

Subjektive, nicht-systematische Analyse mit internationalen Beispielen und nationalem Bezug

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Prof. Dr. Leonie Sundmacher
Lehrstuhl für Gesundheitsökonomie
Technische Universität München

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Trends & Evergreens sowie neue Ansätze & Möglichkeiten







- **Trends & Evergreens:** Versorgungsforschung interagiert mit Entwicklungen der Gesundheitspolitik/ der Bevölkerungsgesundheit:
Covid-19-Pandemie/ Ausbau des ÖGD; Digitalisierung & Innovationen; regionale Über-, Unter- und Fehlversorgung; Pflegewissenschaften; Patientenorientierung; Arzneimittelmarkt, Prävention, Ungleichheit in Gesundheit & Versorgung, Gendergerechtigkeit ↔ Finanzstabilität
- **Starke inhaltliche Strömungen:**
International: Covid-19-Pandemie; Forschung zu (regionaler) Über-, Unter- und Fehlversorgung, Versorgungsforschung zu Arzneimitteln
Deutschland: Sektorenübergreifende Versorgung entlang des Patientenpfads
- **Neue Ansätze/ Methoden:** Evaluation und Implementierung von komplexen Interventionen (MRC-Guidelines); neue Methoden in der Analyse von Netzwerken und Pfaden (ML); Räumliche Analysen
- **Neue Möglichkeiten:** Zugang zu Daten im Rahmen der Digitalisierung

(Regionale) Über-, Unter-, und Fehlversorgung

RESEARCH ARTICLE

HSR Health Services Research

Physician variation in the de-adoption of ineffective statin and fibrate therapy

Alexander Everhart BA^{1,2}  | Nihar R. Desai MD, MPH³ | Bryan Dowd PhD¹  |
Jeph Herrin PhD³  | Lucas Higuera MA^{1,4} | Molly Moore Jeffery PhD⁵  |
Anupam B. Jena MD, PhD^{6,7,8}  | Joseph S. Ross MD, MHS³ | Nilay D. Shah PhD⁵ |
Laura Barrie Smith PhD⁹ | Pinar Karaca-Mandic PhD^{1,8} 

- Ziel war die Beschreibung des Verordnungsverhalten von Ärzten bzgl. Statinen und Fibraten nach Änderung der med. Evidenz
- Accord Lipid Trial: Wirksamkeit von Statinen & Fibraten vs. Statine bei kardiovaskulären Erkrankungen von Diabetes II Patienten? Kombination nicht wirksamer
- Verknüpfte Abrechnungsdaten der USA aus den Jahre 2007 – 2015
- Im Schnitt reduzierten Ärzte die Verordnungen von Fibraten. Allerdings steigerte eine Subgruppe die Verordnung von Fibraten nach dem Trial

Objective: To describe physicians' variation in de-adopting concurrent statin and fibrate therapy for type 2 diabetic patients following a reversal in clinical evidence.

Data Sources: We analyzed 2007-2015 claims data from OptumLabs[®] Data Warehouse, a longitudinal, real-world data asset with de-identified administrative claims and electronic health record data.

Study Design: We modeled fibrate use among Medicare Advantage and commercially insured type 2 diabetic statin users before and after the publication of the ACCORD lipid trial, which found statins and fibrates were no more effective than statins alone in reducing cardiovascular events among type 2 diabetic patients. We modeled fibrate use trends with physician random effects and physician characteristics such as age and specialty.

Data Extraction: We identified patient-year-quarters with one year of continuous insurance enrollment, type 2 diabetes diagnoses, and fibrate use. We designated the physician most responsible for patients' diabetes care based on evaluation and management visits and prescriptions of glucose-lowering drugs.

Principal Findings: Fibrate use increased by 0.12 percentage points per quarter among commercial patients (95% CI, 0.10 to 0.14) and 0.17 percentage points per quarter among Medicare Advantage patients (95% CI, 0.13 to 0.20) before the trial and then decreased by 0.16 percentage points per quarter among commercial patients (95% CI, -0.18 to -0.15) and 0.05 percentage points per quarter among Medicare Advantage patients (95% CI, -0.06 to -0.03) after the trial. However, 45% of physicians treating commercial patients and 48% of physicians treating Medicare Advantage patients had positive trends in prescribing following the trial. Physicians' characteristics did not explain their variation (pseudo $R^2 = 0.000$).


Conclusion: On average, physicians decreased fibrate prescribing following the ACCORD lipid trial. However, many physicians increased prescribing following the trial. Observable physician characteristics did not explain variations in prescribing.

(Regionale) Über-, Unter-, und Fehlversorgung

RESEARCH ARTICLE

HSR Health Services Research

Using machine learning to advance disparities research: Subgroup analyses of access to opioid treatment

Yinfei Kong PhD¹ | Jia Zhou PhD² | Zemin Zheng PhD² | Hortensia Amaro PhD³ |
Erick G. Guerrero PhD⁴ 

- Analyse von Ungleichheiten im Zugang zu Opioid-Suchtbehandlung (z Bsp. Wartezeiten)
- Knapp 1 Mio. Behandlungen im Zeitraum 2015 – 2017
- Retrospektive Subgruppenanalyse mit ML-Techniken
- Regionalspezifische Faktoren erklärten Ungleichheiten (beyond race)
- Kalifornien: u.a. Aussteller der Überweisung, Obdachlosigkeit; Maryland u.a. Frühere Episoden & vorangegangene Suchterkrankungen
- Standardisierte Methode soll Suche nach Determinanten von Ungleichheit vereinfachen

Abstract

Objective: To operationalize an intersectionality framework using a novel statistical approach and with these efforts, improve the estimation of disparities in access (i.e., wait time to treatment entry) to opioid use disorder (OUD) treatment beyond race.

Data source: Sample of 941,286 treatment episodes collected in 2015–2017 in the United States from the Treatment Episodes Data Survey (TEDS-A) and a subset from California ($n = 188,637$) and Maryland ($n = 184,276$), states with the largest sample of episodes.

Study design: This retrospective subgroup analysis used a two-step approach called virtual twins. In Step 1, we trained a classification model that gives the probability of waiting (1 day or more). In Step 2, we identified subgroups with a higher probability of differences due to race. We tested three classification models for Step 1 and identified the model with the best estimation.

Data collection: Client data were collected by states during personal interviews at admission and discharge.

Principal findings: Random forest was the most accurate model for the first step of subgroup analysis. We found large variation across states in racial disparities. Stratified analysis of two states with the largest samples showed critical factors that augmented disparities beyond race. In California, factors such as service setting, referral source, and homelessness defined the subgroup most vulnerable to racial disparities. In Maryland, service setting, prior episodes, receipt of medication-assisted opioid treatment, and primary drug use frequency augmented disparities beyond race. The identified subgroups had significantly larger racial disparities.





Conclusions: The methodology used in this study enabled a nuanced understanding of the complexities in disparities research. We found state and service factors that intersected with race and augmented disparities in wait time. Findings can help decision makers target modifiable factors that make subgroups vulnerable to waiting longer to enter treatment.

(Regionale) Über-, Unter-, und Fehlversorgung

RESEARCH ARTICLE



Disparities in geographic access to medical oncologists

Sruthi Muluk BA¹  | Lindsay Sabik PhD²  | Qingwen Chen MS² |
Bruce Jacobs MD, MPH³  | Zhaojun Sun PhD, MS² | Coleman Drake PhD² 

- Räumliche Regressionen um Zusammenhang zwischen geographischen Zugang zu Onkologen (two-step floating catchment areas) und demographischen Charakteristika in den USA zu messen
- Ländlichkeit und geringer sozioökonomischer Status sind mit geringerem Zugang assoziiert
- Zielgenauere regionale Versorgungsforschung

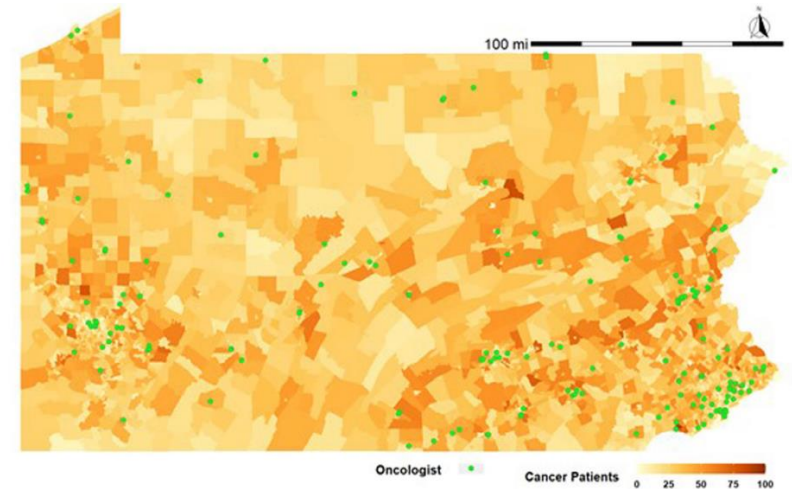
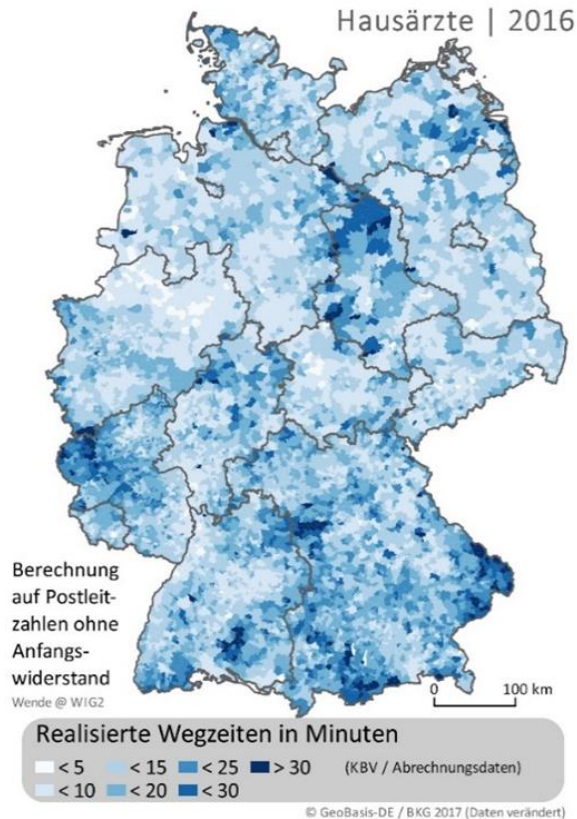
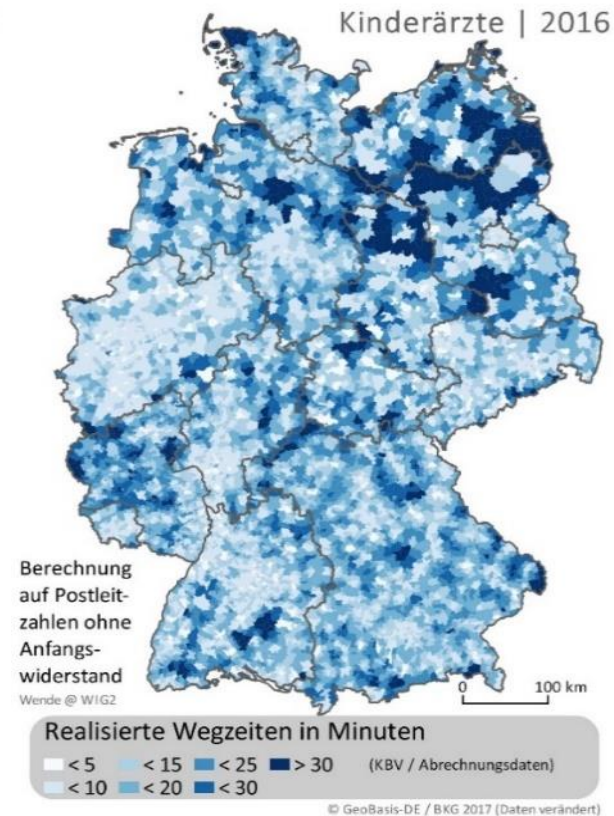


FIGURE 1 Locations of cancer patients and medical oncologists. The 2019 CMS Base Provider Enrollment File was used to identify medical oncologists in Pennsylvania. The 2018 CMS Physician Compare data and Google searches were used to find medical oncologist addresses. These addresses were geocoded using OpenCage Geocoder. Data on cancer patient census tracts were obtained from the 2014 to 2016 Pennsylvania Cancer Registries. [Color figure can be viewed at wileyonlinelibrary.com]

How good is spatial access to health care?



206 mio.
cases



23 mio.
cases

Sundmacher, L et al. (2018): Gutachten zur Weiterentwicklung der Bedarfsplanung i.S.d. §§99.ff. SGB V zur Sicherung der ärztlichen Versorgung. Im Auftrag des G-BA

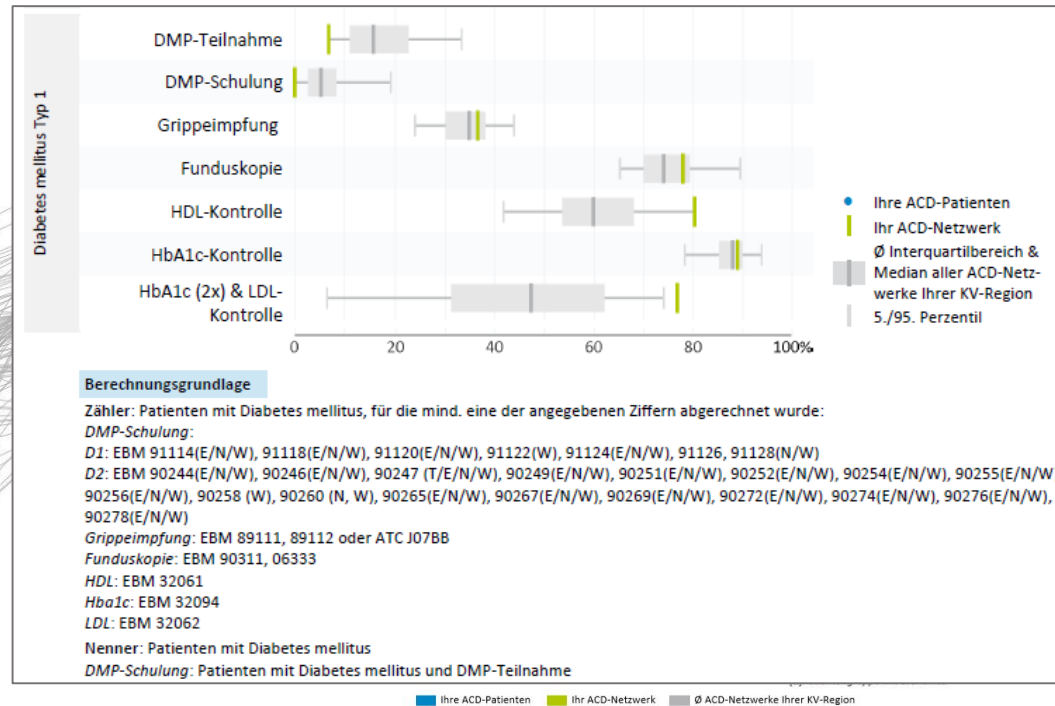
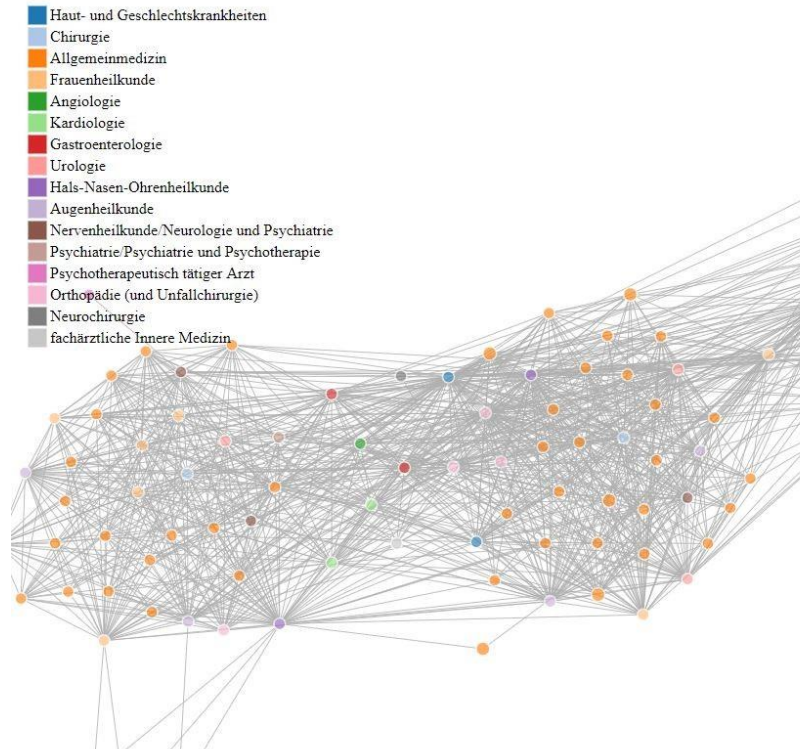
(Regionale) Über-, Unter-, und Fehlversorgung

- Regionale Disparitäten in der ambulanten Versorgung und in der Krankenhausversorgung – Fokus auf qualitativ hochwertige Versorgung im ländlichen Raum & regionale Unterschiede in Behandlungen
- Big Data Analysen & Trend zu Machine Learning (allein 51 Studien, die Patientenpfade mithilfe von ML auf Routinedaten abbilden)
- Zunahme der Versorgungsforschung im Bereich Arzneimittel (Opioidkrise in den USA, Fokus auf Innovationen/ Diffusion)

- Forschung zu Leitlinienadhärenz und –implementierung
- Abbildung von Patientenpfaden und Netzwerken/ Accountability & Zuordnung

Accountable Care in Germany – a cluster randomised controlled trial

ACD Netzwerk Nr. 15



Schüttig, W., Flemming, R., Höhling-Mosler, C., Leve, V., Reddemann, O., Schultz, A., Brua, E., Brittner, M., Meyer, F., Pollmanns, J., Martin, J., Czihal, T., von Stillfried, D., Wilm, S., Sundmacher, L. (2022): Development of indicators to assess quality and patient pathways in interdisciplinary care for patients with 14 ambulatory-care-sensitive conditions in Germany. BMC Health Services Research. 22:1015. doi: 10.1186/s12913-022-08327-1.

Flemming, R., Schüttig, W., Ng, F., Leve, V., Sundmacher, L. (2022): Using social network analysis methods to identify networks of physicians responsible for the care of specific patient populations. BMC Health Services Research. 22. 462. doi:10.1186/s12913-022-07807-8.

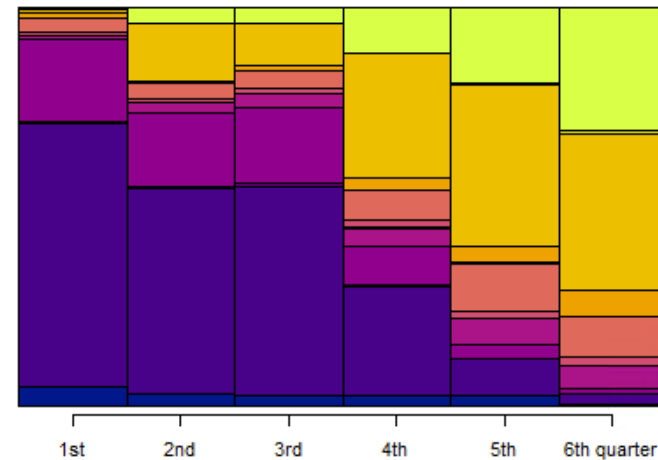
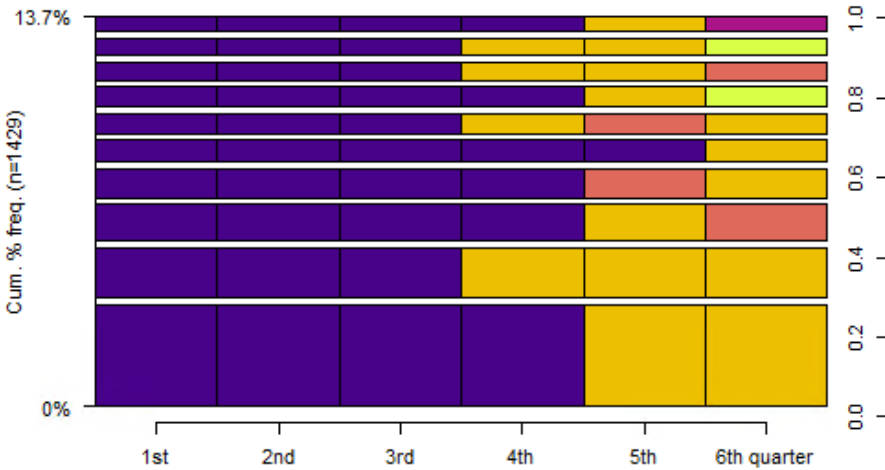
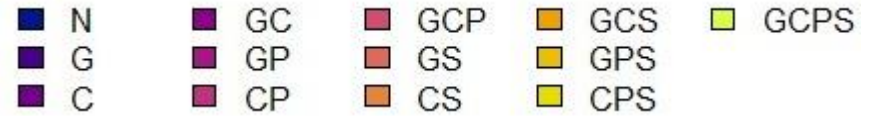
Germany has a high rate of **left heart catheterisation** (11 163/million population). What happens before a **LHC**?

Physician visit:

G – GP
C – Cardiologist

Medication:

S – Symptom-oriented therapy
P – Prognostic therapy



Left: Typical patient pathways of the cluster „mix“. This is one of five identified clusters before LHC.

Right: States distribution plot

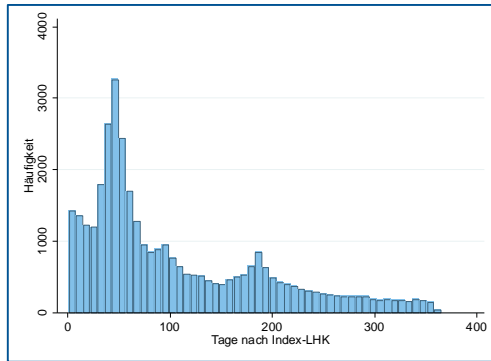


Table 6 Results of logistic regression for recatheterization within 180 days/360 days after index event within 10 days of recatheterization, odds ratios

	only CA_180d		CA/PCI/ByP_180d		only CA_360d		CA/PCI/ByP_360d	
	OR	p	OR	p	OR	p	OR	p
base: cluster Mix								
cluster G	1.63	0.01	1.36	0.02	1.20	0.20	1.23	0.08
cluster S	1.48	0.05	1.29	0.05	1.26	0.10	1.22	0.09
cluster P	1.74	0.01	1.40	0.04	1.50	0.02	1.42	0.01
cluster PS	1.64	0.01	1.36	0.01	1.43	0.01	1.33	0.01

The analyses are based on a complete set of merged data from AOK, TK and Barmer data (2014-16; n=147,272 patients)

Novelli, A,, Sundmacher L. Identifying and Investigating Ambulatory Care Sequences Before Invasive Coronary Angiography. Erschienen in Medical Care

Covid-19-Pandemie

PERSPECTIVE

Health Economics WILEY

Modeling to inform economy-wide pandemic policy: Bringing epidemiologists and economists together

Michael E. Darden¹ | David Dowdy² | Lauren Gardner³ |
Barton H. Hamilton⁴ | Karen Kopecky⁵ | Melissa Marx² |
Nicholas W. Papageorge⁶ | Daniel Polsky¹ | Kimberly A. Powers⁷ |
Elizabeth A. Stuart² | Matthew V. Zahn⁶

RESEARCH ARTICLE

Health Economics WILEY

On the demand for telemedicine: Evidence from the COVID-19 pandemic

Matias Busso | Maria P. Gonzalez | Carlos Scartascini

RESEARCH BRIEF

HSR Health Services Research

Disruptions in preventive care: Mammograms during the COVID-19 pandemic

Hummy Song PhD, MPP^{1,2} | Alon Bergman PhD^{2,3} | Angela T. Chen MA^{2,4} |
Dan Ellis MA⁵ | Guy David PhD^{2,3} | Ari B. Friedman MD, PhD^{2,6,7} | Amelia M. Bond
PhD^{2,8} | Julie M. Bailey MBA⁵ | Ronald Brooks MD⁵ | Aaron Smith-McLallen PhD⁵

- Jegliche Kombination von Disziplinen und Autorentams
- Interdisziplinäre Verbundforschung & Journals haben schnell reagiert
- Big Data
- Pandemie als Katalysator für die wichtigen Bedarfe der Versorgungsforschung: Schnell verfügbare, repräsentative Datensätze
- Konzertierte Forschung

Vielen Dank für die
Aufmerksamkeit!

Prof. Dr. Leonie Sundmacher
Lehrstuhl für Gesundheitsökonomie
Email: leonie.sundmacher@tum.de
Webseite: <https://www.sg.tum.de/chec/startseite/>

