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## 110 years after Auguste Deter

### Current evidence and future perspectives in dementia care research

In November 1906, Alois Alzheimer presented a lecture “Über eine eigenartige Erkrankung der Hirnrinde” [About a peculiar disease of the cerebral cortex] at the “37th Meeting of Southwest German Psychiatrists” in Tübingen. For the first time, he described the brain pathology of the patient Auguste D., who from then on was considered the first patient with this special form of dementia. Later on, Emil Kraepelin suggested naming this form of dementia “senile dementia of the Alzheimer type (SDAT)”. Today, “Alzheimer” and “Dementia” are often used as synonyms by the lay public, highlighting the importance of the finding, even 111 years later.

However, the original patient file was forgotten since 1909 and surprisingly, it took 80 years following Alois Alzheimer’s death in 1915 until Konrad Maurer and his team discovered the original patient record in the archives of the University of Frankfurt [1]. Back then, they stated: “After 90 years, the blue-coloured cardboard file was still in good condition” and revealed the full name of the first patient with dementia as: Auguste Deter. The full story of its discovery was published in the *Lancet* in 1997 and is worth reading [1]. As a sidekick of medical history, the file was found 2 days after the inauguration of Alzheimer’s birthplace in Marktbreit/Bavaria as a museum and conference cen-

ter. Eli Lilly had purchased the house, which was renovated under the direction of Ulrike Maurer and which is still a museum and conference center (<http://www.alzheimer-haus.de/>).

At this historical place, the German Center for Neurodegenerative Diseases (DZNE) and the Institute of General Practice and Family Medicine Düsseldorf organized an international workshop on May 27 and 28, 2016, 110 years after the discovery of Alzheimer’s dementia. The aim was to present and discuss current evidence and future perspectives in dementia care research. The need and relevance for exchange of knowledge and ideas focusing on dementia care was considered necessary and is also underlined by the recently increasing

numbers of special issues or articles about all facets of dementia, for example, in the *European Journal of Geriatrics* as well (with a focus on the impact to a changing society [2], diagnostics [3], caregiver [4, 5], pharmacotherapy [6], treatment and care in selected settings [7–9] to name but a few).

With participants from the US, the UK, the Netherlands, and Germany the two days were packed with talks and discussion focusing on (1) current evidence, (2) issues in nursing, qualification and care, (3) interdisciplinary approaches in health care research, and (4) translating evidence into practice. The present special issue of *Zeitschrift für Gerontologie und Geriatrie* is a selective summary of topics from this workshop to illustrate



In memory of Ulrike Maurer.

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the heterogeneity of the research field and to give a brief insight into some of the challenging issues health care systems worldwide face when dealing with dementia.

In the section for current evidence, J.R. Thyrian [10] gives an overview on recent and current research projects in Germany aiming to provide data and evidence-based knowledge about the prevalence, incidence, and risk factors of dementia. He describes health care intervention trials that offer scientific methods and evidence for their efficacy and impact on the health care system. While he describes methodological challenges for interventional health care research, he emphasizes its feasibility and importance. More specifically, Gill et al. [11] focus on evidence to optimize care for people with dementia following hip fracture. They identify three themes important for improvement: recognition of impairment, response by way of training staff, review of the important outcomes. These themes are not specific to their research area; they appear throughout many topics in different facets.

In primary care, the general practitioner (GP) plays an important role in the recognition, diagnosis, treatment, and care for people with dementia. Thus, several articles focus on this special setting. The article of Pentzek et al. [12] takes up the importance of recognition of impairment and discusses this for GP. The authors present a meta-synthesis of qualitative studies with GPs to identify barriers in recognition of dementia. They propose a concept for increasing early awareness for cognitive warning signals rather than early recognition of symptoms which is less person-centered. Along this line, Pentzek et al. elucidate the concept of subjective memory impairment (SMI) and its recognition in the GP practice [13]. They provide a narrative overview of recent criteria, provide some studies of SMI in GP practice and deduct a study design how this concept could be transferred into the GP practice for the benefit of the troubled patients. More into detail in a specific topic—driving—that is crucial and important for many patients and GPs is elucidated by Leve et al. [14].

The authors describe results of focus groups in identifying relevant aspects where and how GPs can be supported in approaching this emotional topic with their patients. The authors describe challenges such as the assessment of fitness to drive, concerns about compromising the patient–physician relationship, raising the issue and uncertainties about the GP's own role. They conclude that tailored recommendations for GPs are needed.

From an international perspective, Iliffe et al. [15] illustrate the issue of recognition and management of dementia in primary care in the UK. As the UK has been pursuing educational interventions, incentivization of GP and networks for memory clinics for some time now, Iliffe et al. provide an analysis of the effectiveness of these measures. With data that would not be available in Germany, the authors illustrate that despite these measures there was no upturn in documented incidence or prevalence of dementia. This is astonishing but highlights the need for further and continuous evaluation of policy measures. There seems to be no easy solution.

Dementia treatment and care is not solely up to the GP, but an interprofessional matter. Considering this, Dreier-Wolfgramm et al. [16] give an international overview of different collaborative care models and compare them regarding aims, measures, and professions involved to deduct conclusions for interprofessional learning (IPL). IPL is of growing interest since hardly any profession per se is educated to meet the need of collaborating efficiently in dementia care. The authors identify four topics to be important and of need in IPL programs: early diagnosis, postdiagnostic support, advanced care planning, and effective collaborative care.

But even when people are educated, how can interprofessional, multiprofessional or transprofessional work be conducted? As an example for such an approach Nieuwboer et al. [17] describe a network focused on a collaborative care model in the Netherlands. They describe in detail the implementation of five core processes into routine care and the scientific evaluation—a mixed method study

to test the innovation and effectiveness. They present initial results about the clinical practice and that quality of care can be improved by Dementia Networks. However, they stress the discrepancy or need to weigh strict methodology against external validity for such approaches.

The translation of evidence into routine practice is one of the biggest challenges in health care research. Here Kilimann et al. [18] refer to a phase model established for biomarkers that describes the scientific process from clinical research to health care. Clinical research in diagnostics has long been emphasizing biomarkers for early and even presymptomatic diagnosis of dementia. The use of biomarkers has increased over the last years and there is the possibility that disease-modifying therapeutics and diagnosis of the disease will change. For the example of hippocampus volumetry, they exemplify the way from clinical research to health care and explain what has been achieved so far and where questions remain and need to be solved.

In the end, it would be good to establish and implement services that people with dementia are efficiently cared for, meeting each person's needs. However, it would be even better to find disease-modifying therapies. But even better than this would be to prevent the disease in general. This is highlighted by the article of Müller et al. who give a current overview about preventive strategies for dementia focusing on physical activity [19]. The authors stress that reducing risk factors would prevent dementia and lifestyle factors are among those risk factors. They point out the impact of cognitive and physical activity on neuroprotection. Combining both activities may result in activities like dance training and the first results are promising. However, as with most other interventions there is a need to establish a solid evidence base.

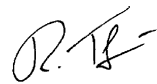
In summary, there are many challenges in dealing with dementia in the health care system. Many approaches have been conducted, some of them with sound scientific methods, some of them with promising results. However, much more research is needed and the group at the workshop identified areas with a strong need for further development:

(1) dealing with the interface between the hospital setting and ambulatory care, (2) sustainable implementation of evidence-based projects into routine care, (3) applying and adapting research methods, (4) dealing with research ethical aspects, and (5) integrating clinical and health care research.

International workshops, fruitful discussions, and building personal relationships with other researchers can improve that. Cognitive stimulation with nice people in a pleasant environment can be considered as quality life time and thus itself be a protective factor for dementia.



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