

Economic Attributes of Caregiver Burden Among Patients with Schizophrenia: A Targeted Literature Review

Xue Han¹, Catherine Travers²,
Carole Dembek³, Amit Kulkarni¹

¹Otsuka Pharmaceutical Development & Commercialization, Inc.,
Princeton, NJ, USA;

²The University of Queensland, St Lucia, QLD, Australia;

³Sumitomo Pharma America, Inc., Marlborough, MA, USA

Key Findings

- Average hours spent and costs for schizophrenia caregiving are higher in Western countries (US and Europe) as compared to other countries, which could be attributed to cultural and societal differences, local economic state, as well as widespread methodological heterogeneity in the studies (e.g., definition of caregiving).
- Hours of informal care provided may limit caregiver's productivity and reduce their capacity to earn an income potentially leading to a greater economic burden.
- Providing optimal training and support to caregivers may help alleviate productivity losses leading to significant savings in societal costs among caregivers of schizophrenia patients.¹

Introduction

- Schizophrenia exerts a substantially higher economic burden due to direct treatment costs (e.g., physician visits, medications, hospitalizations, costs of transport to healthcare appointments), social welfare costs, as well as indirect costs including productivity losses due to decreased ability to work that impacts both the patients and their caregivers.^{2,3}
- Informal caregivers (usually family members including parents and spouses) typically provide many hours of care for the person with schizophrenia. Providing such care imposes a financial and psychological burden on caregivers with substantial emotional stress and reduced quality of life (QoL), as well as negatively impacting their ability to work, their social lives, and their physical health.^{4,5}
- Although indirect cost data are available, a global view and understanding of the economic burden of caregiving is lacking.

Objectives

The primary objective of this study was to summarize recent data relating to the economic burden associated with caring for a patient with schizophrenia through a targeted literature review. This included the hours spent by caregivers taking care of patients with schizophrenia, the economic value of those hours, and work productivity loss.

Methods

- Studies reporting hours spent on formal (professional) and informal caregiving (family/friends) for schizophrenia patients, work productivity loss, and costs associated with caregiving were included (Figure 1).

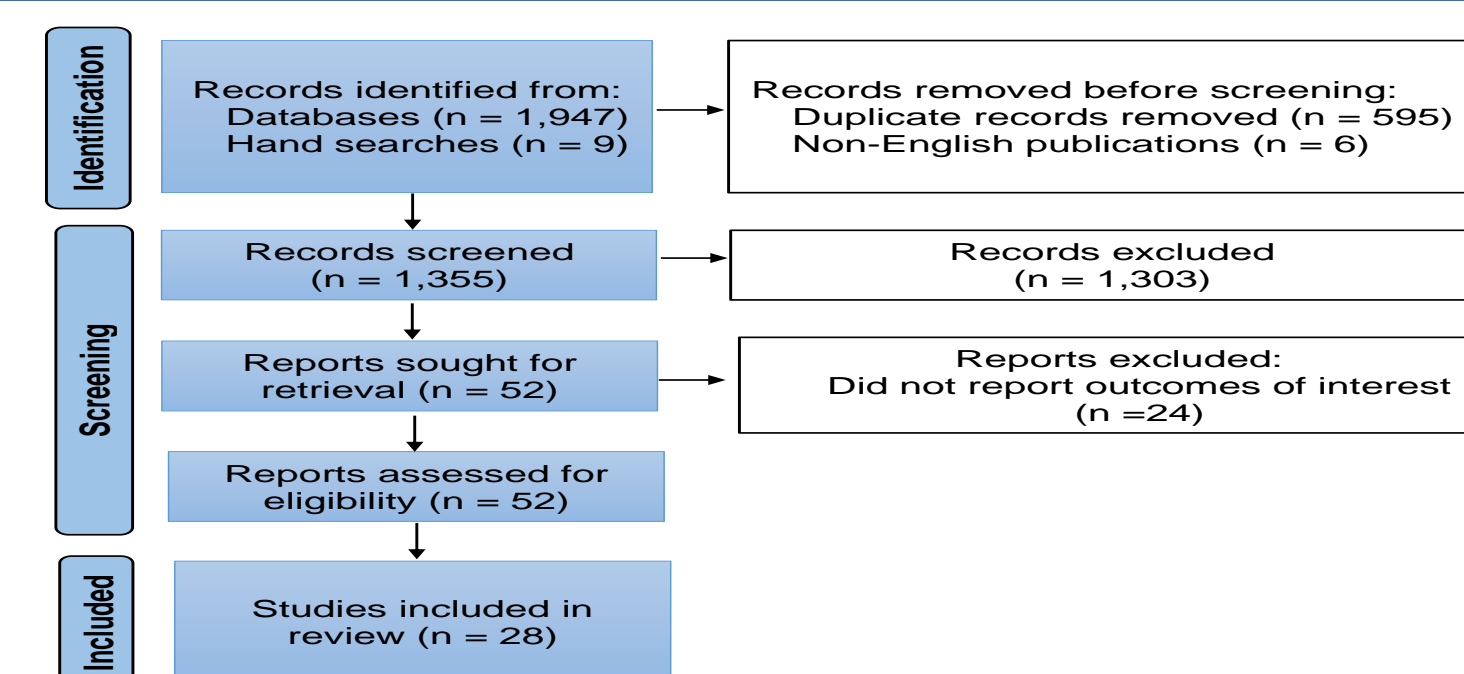
Methods

- Studies reporting hours spent on formal (professional) and informal caregiving (family/friends) for schizophrenia patients, work productivity loss, and costs associated with caregiving were included (Figure 1).
- The Cochrane Library, Medline, and EMBASE databases, and bibliographies of published papers were searched from 2000-2022.
- The study quality was assessed using the Checklist for Analytical Cross-Sectional Studies from the Joanna Briggs Institute (JBI) suite of tools.
- Data were extracted and synthesized in narrative form.
- Direct and indirect costs associated with caring for a patient with schizophrenia: e.g., adult day care/respite care, travel costs, and any financial support provided by the caregiver to the patient.
- The number of hours a caregiver might spend caring for a patient with schizophrenia.
- Loss of productivity (missed days at work or reduced productivity due to caregiving responsibilities) of caregivers, and caregiver compensation e.g., carer allowance by any government or other body to compensate the caregiver for their time and effort.
- The cost estimates reported by all included studies were converted to 2022 US dollars using the Campbell and Cochrane Economics Methods Group Evidence for Policy and Practice Information and Coordination (CCMEMGEPPi) Centre cost converter.⁶

Results

- The final review included 28 studies (Figure 2).
- Key quality assessment features such as inclusion criteria, study population, interventions, and outcomes were clearly stated in most of the studies.
- Majority of the studies were conducted in the United States (US) (n=8) and in Europe (n=14), while the remaining studies were conducted in Ghana (n=1), India (n=1), and 4 in Asia (1 study in each of China, Japan, South Korea, Thailand).
- Caregivers spent on average 8 hours/week in Asia (Thailand, China, India), 29 hours/week in Europe, and 36 hours/week in the US caring for patients with schizophrenia.
- Average annual caregiver costs ranged from \$1,586 in China to \$30,591 in the US. (Table 1)
- In this review, the burden of informal care mostly exceeded that of formal care across all countries, with 4% to 19% of informal caregivers giving up work due to their additional caregiving responsibilities.
- Costs associated with caregiver's work productivity loss were the main drivers of caregiving costs and varied across countries.

Figure 2: Study Flow



Disclosures And Acknowledgements

This study was supported by funding from Otsuka Pharmaceutical Development & Commercialization, Inc and Sumitomo Pharma America, Inc

References

1. <https://aspe.hhs.gov/reports/economic-impacts-programs-support-caregivers-final-report>
2. Velligan D, Rao S. The Epidemiology and Global Burden of Schizophrenia. The Journal of Clinical Psychiatry, January 2023.
3. Kotzeva A, Mittal D, Desai S, Judge D, Samanta K. Socioeconomic burden of schizophrenia: a targeted literature review of types of costs and associated drivers across 10 countries. J Med Econ. 2023 Jan-Dec;26(1):70-83.
4. Csoboth C, Witt EA, Villa KF, O'Gorman C. The humanistic and economic burden of providing care for a patient with schizophrenia. Int J Soc Psychiatry. 2015;61(8):754-61.
5. Kamil SH, Velligan DI. Caregivers of individuals with schizophrenia: who are they and what are their challenges? Curr Opin Psychiatry. 2019;32(3):157-63.
6. <http://eppi.ioe.ac.uk/costconversion/default.aspx>

Figure 1: Search Strategy

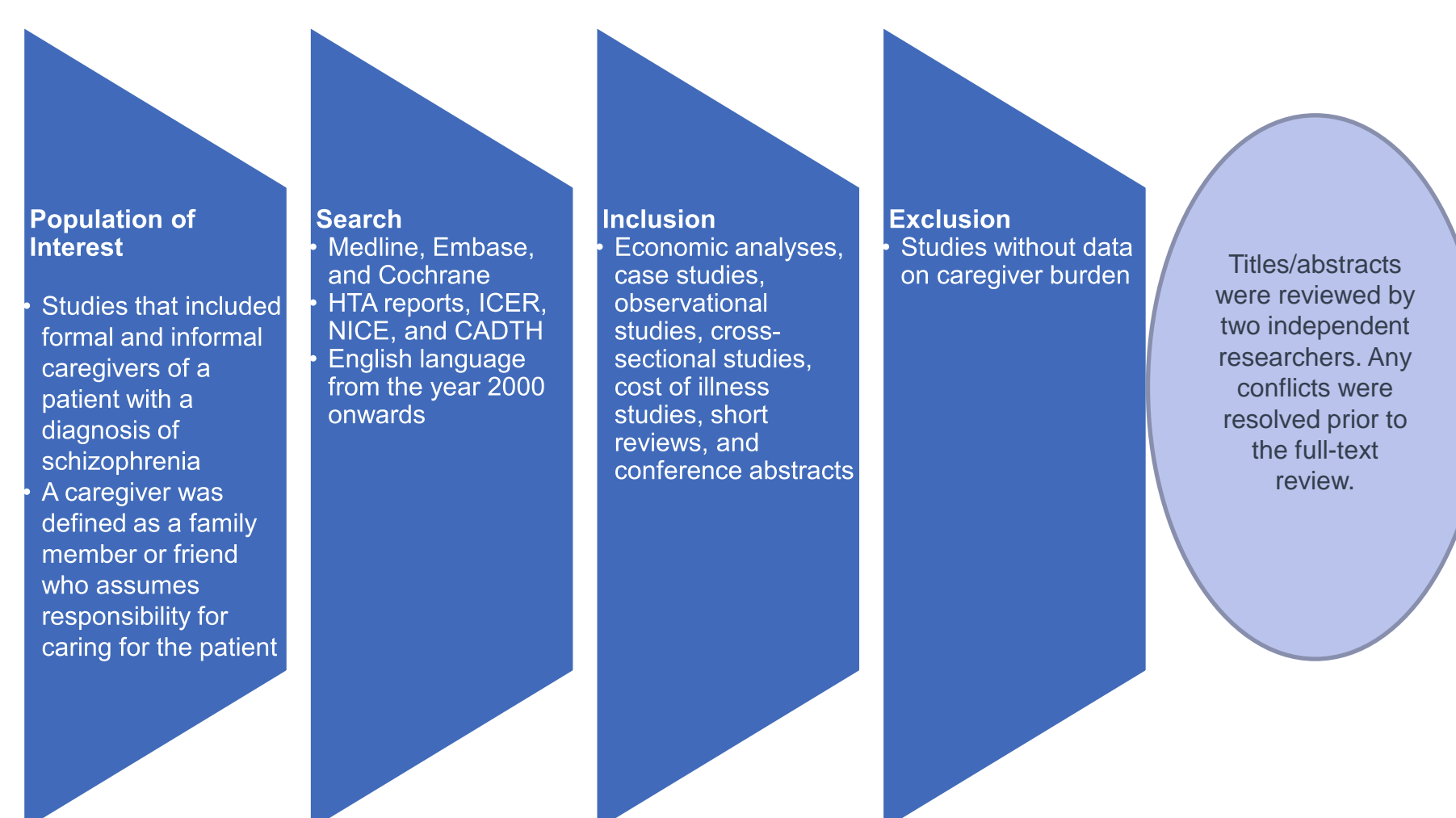


Table 1: Schizophrenia Caregiving Costs: Summary

Study Author & Year	Country	Costs Estimates (Converted to US 2022 \$)
Ignatova et al., 2019	Bulgaria	Average Caregiver Cost= \$3,784.91 Per Year; Additional costs of exacerbation were \$1,808.46 for the past six months
Hastrup et al., 2020	Denmark	Average Caregiver Cost= \$3,667.49 Per Year
Fasseeh et al., 2018	Europe	Total Caregiver Cost (Spain) = \$51,080.55 to \$1,07,973.84 Per Year
Mangalore & Knapp, 2007	UK	Average Indirect Cost (overall) \$27,193 out of which 38% attributed to caregiving
Frey, 2014	Germany	Average Caregiver Cost= \$11,020.98 Per Year
Behan et al., 2008	Ireland	Total Indirect Cost = \$59,253,376.57 Per Year Average Caregiver Cost= \$11,943.84 Per Year
Aranda-Reneo et al., 2013	Spain	Average Caregiver Cost= \$47,175.02 Per Year (based on the average cost of public in-home care); Average Caregiver Cost= \$78,174.65 Per Year (based on average national wage)
Olivia-Moreno et al., 2006	Spain	Total Caregiver Cost (informal care) = \$1,983,001,031.38 Per Year; Average Caregiver Cost= \$6,837 Per Year
Lauber et al., 2005	Switzerland	Additional Caregiver Cost = \$2,897.49-\$4,635.99 in last two weeks before exacerbation
Pletscher et al., 2015	Switzerland	Average Caregiver Cost= \$1,124.89 Per Year
Sharma et al., 2006	India	Indirect Costs due to Caregiver's Work Productivity Loss= \$208.44-\$745.20 Per Year
Phanthunane et al., 2012	Thailand	Caregivers' Financial Support of Patients = \$167.40 Per Year
Desai et al., 2013b	US	Total Caregiver Cost: \$7,516,589,845.54 Per Year; Average Caregiver Cost= \$9,917.75 Per Year
Kadokia et al., 2022	US	Total Caregiver Cost = \$119,449,135,253.02 (Average \$30,591.96 Per Patient)
Wu et al., 2005	US	Total Caregiver Cost = \$1,164,569,415.93 Per Year
Opoku-Boateng et al., 2017	Ghana	Average Caregiver Cost= \$3,698.82 Per Year
Xu et al., 2020	China	Average Caregiver Cost= \$1,586 Per Year
Chang et al., 2008	South Korea	Indirect Costs due to Caregiver's Productivity Loss: \$180.4 Million Per Year; Average Caregiver Cost= \$302.1 Per Caregiver Per Year



Scan the code for an electronic copy of this poster.