

Socioeconomic impact of preterm birth in Germany and Austria: A parental perspective

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Background and objective: In Europe, the prevalence rate of premature birth ranges from 5.5 to 11.4% - an average of 7.1% of all live births. Preterm birth poses a growing risk to health and well-being of many Europeans and increasing costs to society in terms of lifelong need for support. Our objective was to measure the socioeconomic burden of preterm birth on their parents and the society in Germany and Austria.

Methods: A novel web-based technology was constructed to perform a survey of parents of preterm infants. It was developed in collaboration with parents, pediatricians and socioeconomic researchers. Main focus were morbidity, social status, direct and indirect costs. Parents were invited to participate to this online-questionnaire from information letter sent out to pediatricians and therapists and from websites targeting parents of preterm birth. Data were collected between September 2007 and March 2008 in Germany and Austria.

Results: Parents of 588 preterm-birth children responded. The detailed characterisation of the parental perspective on the impact of preterm birth is represented below:

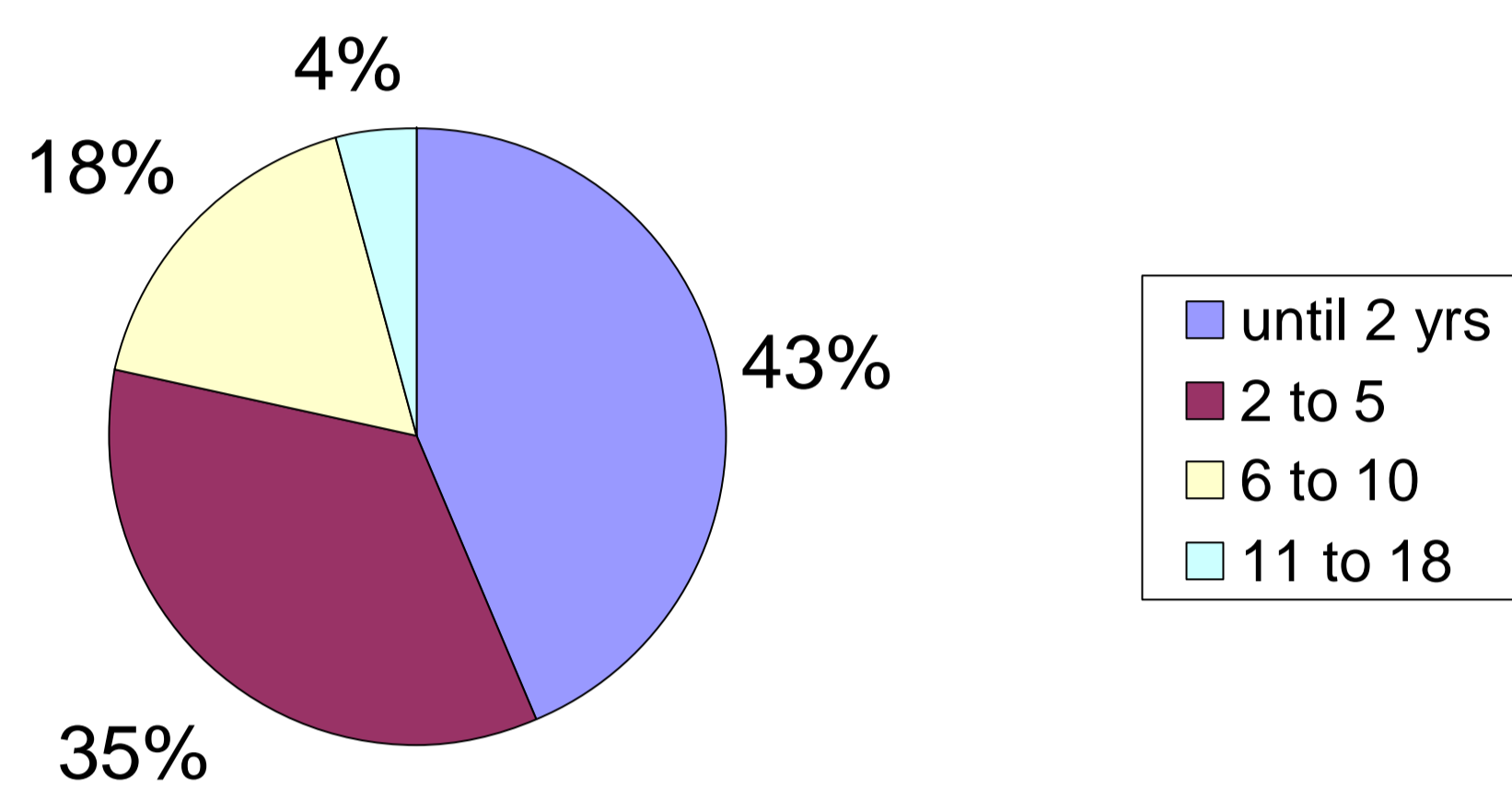


Fig. 1: 80% of the infants were less than 5 years old

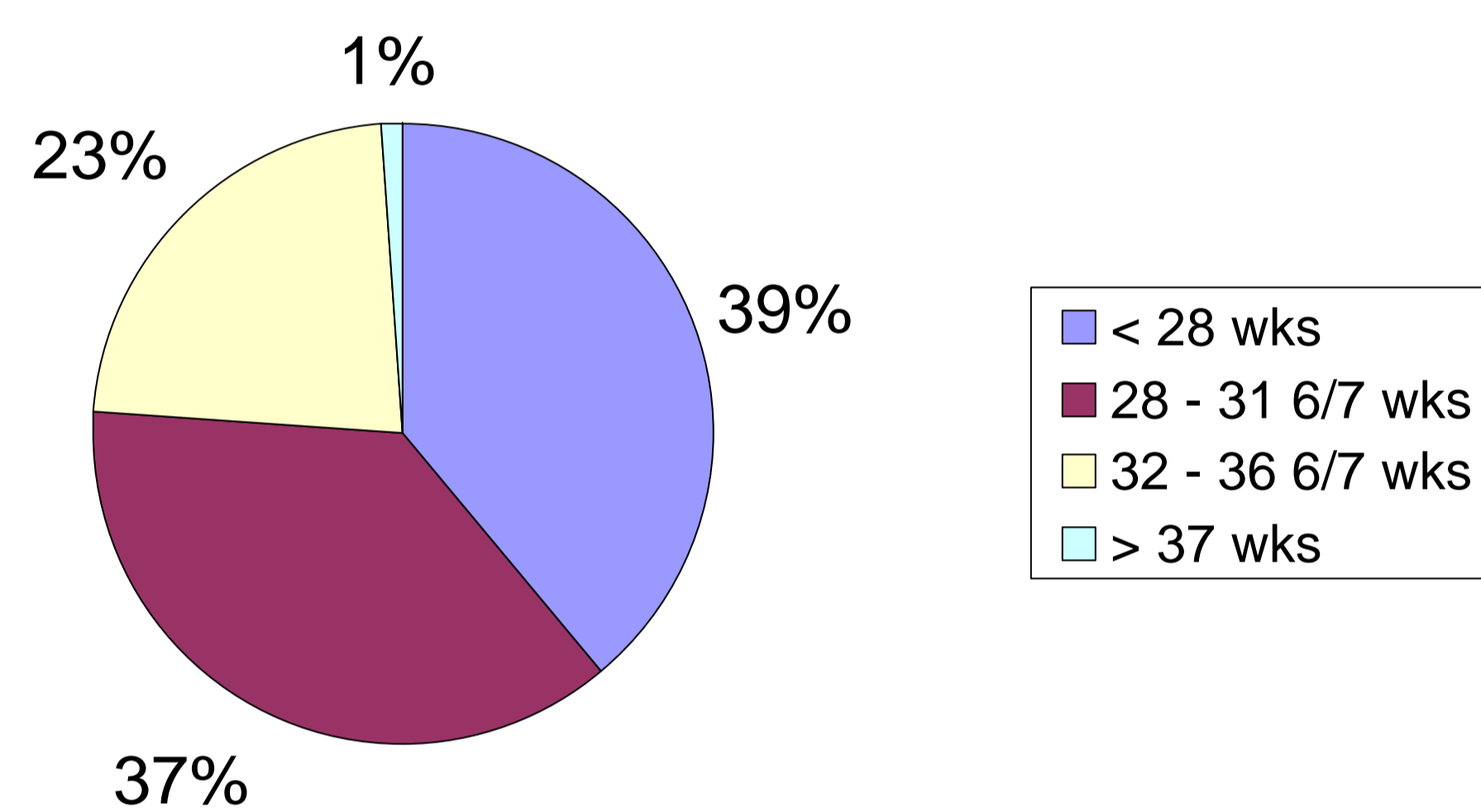


Fig. 2: 76% of the infants were born less than 32 weeks of gestation

	< 28 wks (n=228)	28 - 31 6/7 wks (n=220)	32 - 36 6/7 wks (n=135)
Hospitalisation			
length of stay in hospital/days (average)	116	71	28
readmission after discharge (%)	65	54	42
outpatient examination/days/year	7.3	4.1	2.5
Parent's perspective on neurocognitive development / Type of disability			
overall developmental delay, n (%)	58	42	35
vision, n (%)	46	32	21
hearing, n (%)	8	10	5
language, n (%)	35	24	20
neuromotor, n (%)	38	28	16
feeding difficulties, n (%)	41	30	23
Additional therapies			
physiotherapy, n (%)	86	62	58
occupational therapy, n (%)	47	32	26
speech therapy, n (%)	42	24	20
others (e.g. massage, osteopathy animal or music therapy), n (%)	86	69	26
Adjuvants			
inhaler, n (%)	61	35	21
apnea monitor, n (%)	63	33	12
nursing auxillary, n (%)	9	2	3
others (e.g. glasses, orthoses, wheel chair), n (%)	134	61	35

Tab. 1: Characteristics of hospitalisation, need for additional therapies and adjuvants, Parents perspective on their infants neurocognitive development. Neurological problems were most often diagnosed within the first year of life (70%). They decrease with increasing gestational age. The incidence of most school-related problems (data not shown) is independent of gestational age.

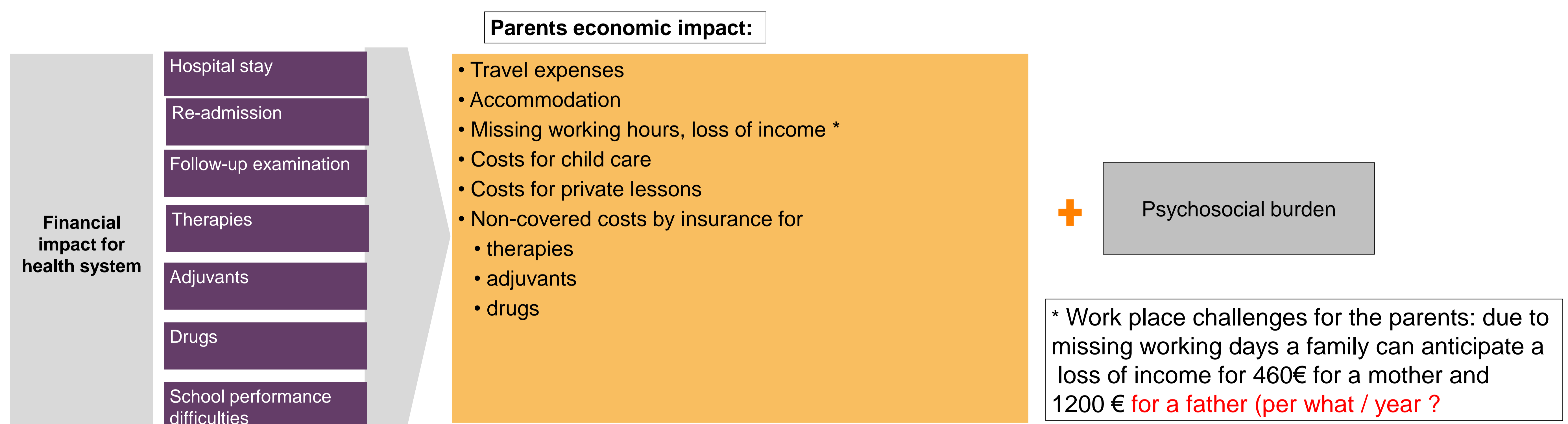


Fig3: Overall socioeconomic impact of preterm birth on the health system and the parents

	Km	costs in € / infant/ in 5 years	€ /infant/ year	Overall costs in Germany (with 15.000 preterm delivery > 32 wks), in € / year
Transportation costs for hospital visits	5.300	1993	399	5.978.000
Transportation cost for follow-up visits	990	372	74	1.117.000
Transportation costs for ambulant treatment	1100	414	83	1.241.000
Transportation costs to therapists	4.560	1715	343	5.144.000
Costs for therapies		1180	236	3.540.000
Costs for drugs		410	82	1.230.000
Costs for drugs		360	72	1.080.000
Costs for child care		170	34	510.000
Amount		6613	1323	19.840.000

• In the first 5 years of age after discharge from perinatal services, parents travelled in total 11.950 km
 • costs for drugs, supportive devices, travel and child care were 6614€
 • in this 5 year period, the children spent 476 hours in therapies like occupational or physiotherapy (95 hours/year)

Tab. 2: Socioeconomic impact of preterm birth on parents and estimated for the society in Germany

Conclusions: This survey is a novel approach to assess the social and economic burden on parents of preterm infants. Moreover, it helps to measure the impact of preterm birth also to the society.