

Burden of Disease Analysis of Ankylosing Spondylitis in Hungary

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AIM

- This study aimed to assess the direct non-medical, indirect and non-reimbursed health services costs of AS in Hungary and to obtain an overview of patients' status, demographics, morbidity and working capacity.

BACKGROUND

- Ankylosing spondylitis (AS) by definition is an idiopathic, inflammatory disorder of the sacroiliac joints and the axial skeleton. Without treatment it can cause increasing irreversible joint damage and rigidity of the spine, occasionally leading to joint deformities and consequently severe functional disorder, resulting in reduced working capacity.¹
- According to the Hungarian National Institute of Rheumatology and Physiotherapy's clinical protocol, AS affects 0.1–0.3% of the population. In Hungary, the prevalence is 0.4% among men over 15 and 0.8% among women.²
- Like other autoimmune inflammatory diseases, the course of AS involves the individual burden to patients and ties up many social resources. It leads to a decline in social engagement and the loss of ability to work, generating significant indirect costs.

METHODS

Data collection

- Between January and March 2014, a questionnaire survey was conducted among patients with AS.
- Questions addressed the disease burden of AS, such as sick leave, reduced working capacity, disability, non-reimbursed health services, need for assistance to perform daily activities, in addition to patient demographics and disease characteristics.
- Questionnaires were transmitted to patients by the relevant patient organizations of AS and were filled out voluntarily and anonymously.
- The responses were recorded on Medalyse (a portal developed by Healthware Consulting Ltd.), and R statistical software and Microsoft Excel were used for data processing and evaluation.
- The survey results are presented in aggregate form only.

Cost calculation

- During the analysis the direct non-medical, indirect costs and the costs of non-reimbursed health services were determined. The determination of direct medical cost was not the subject of this study.
- The direct non-medical costs included the cost of travelling (ambulance transport, other travelling costs) and informal care (help with self-care and travelling).
- The indirect costs included lost wages due to disability and reduced working ability (sick leave, reduced working capacity and disability pension).
- The unit costs of each examined cost type were derived from the Hungarian Central Statistical Office (KSH) and patient statements.
- An exchange rate of 303.59 Hungarian Forint (HUF) per Euro (EUR) was used.
- Missing data were not imputed in the analysis. Considered patient number is presented alongside results if lower than total patient number.

RESULTS

Patient demographics and disease characteristics

- 151 patients completed the questionnaire, of which 37% were women. Mean age was 51 years (standard deviation (SD): 13 years) and average disease duration was 17 years (SD: 12 years).
- At primary diagnosis of AS, 80% of patients had a full-time job, 2% had a part-time job, and only 8% received disability pension (Figure 1).
- At time of survey, only 36% of patients worked full-time, 1% part-time, and the proportion of disability pensioners increased to 42% (Figure 1).
- Nearly half of the respondents required assistance with everyday activities (i.e. housework, travelling, shopping, etc.). In 86% of cases, patients were supported by family members, relatives and friends, while paid nurses provided support in only 7%.

Figure 1. Distribution of patients by employment status at time of diagnosis and time of survey

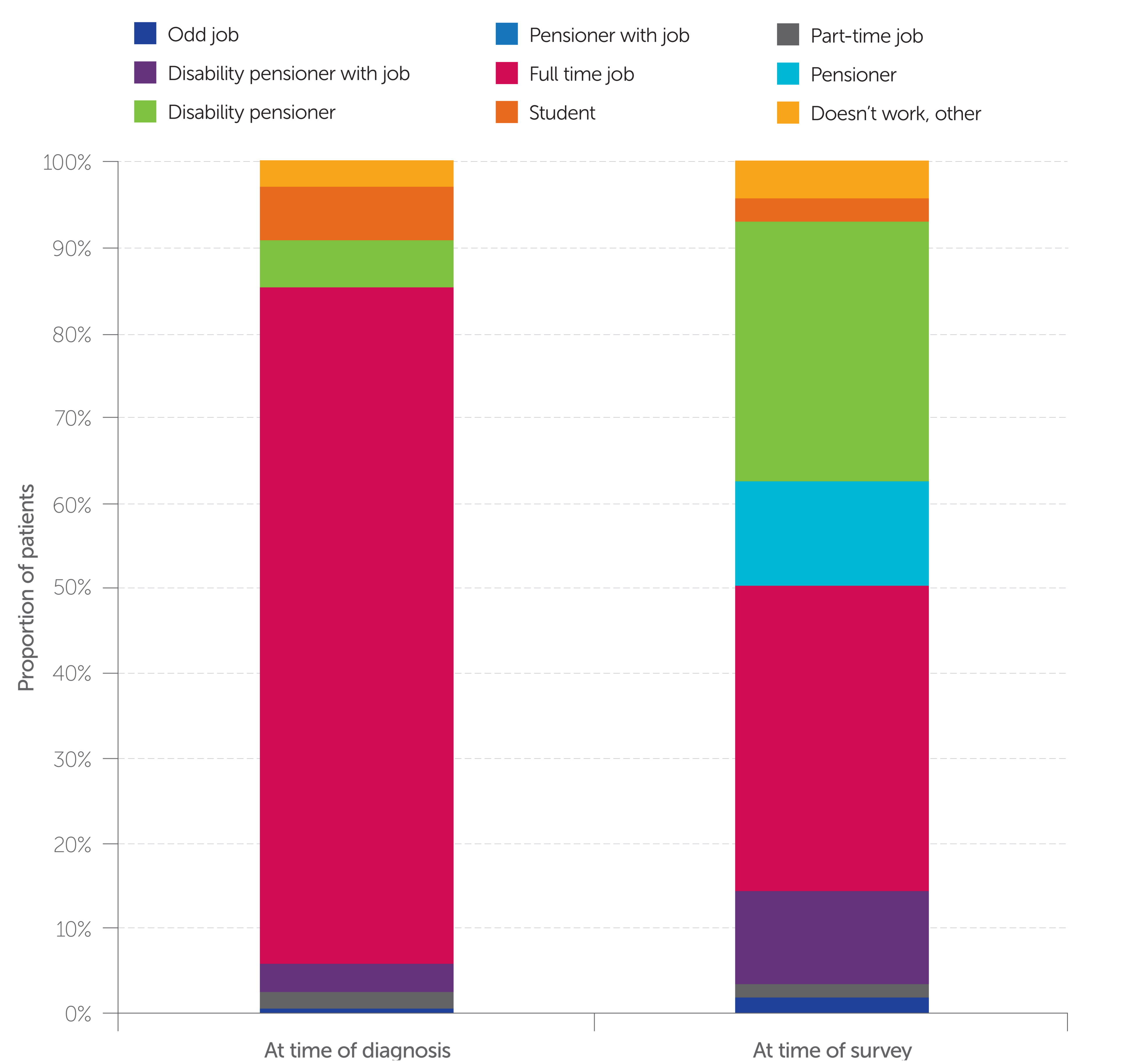
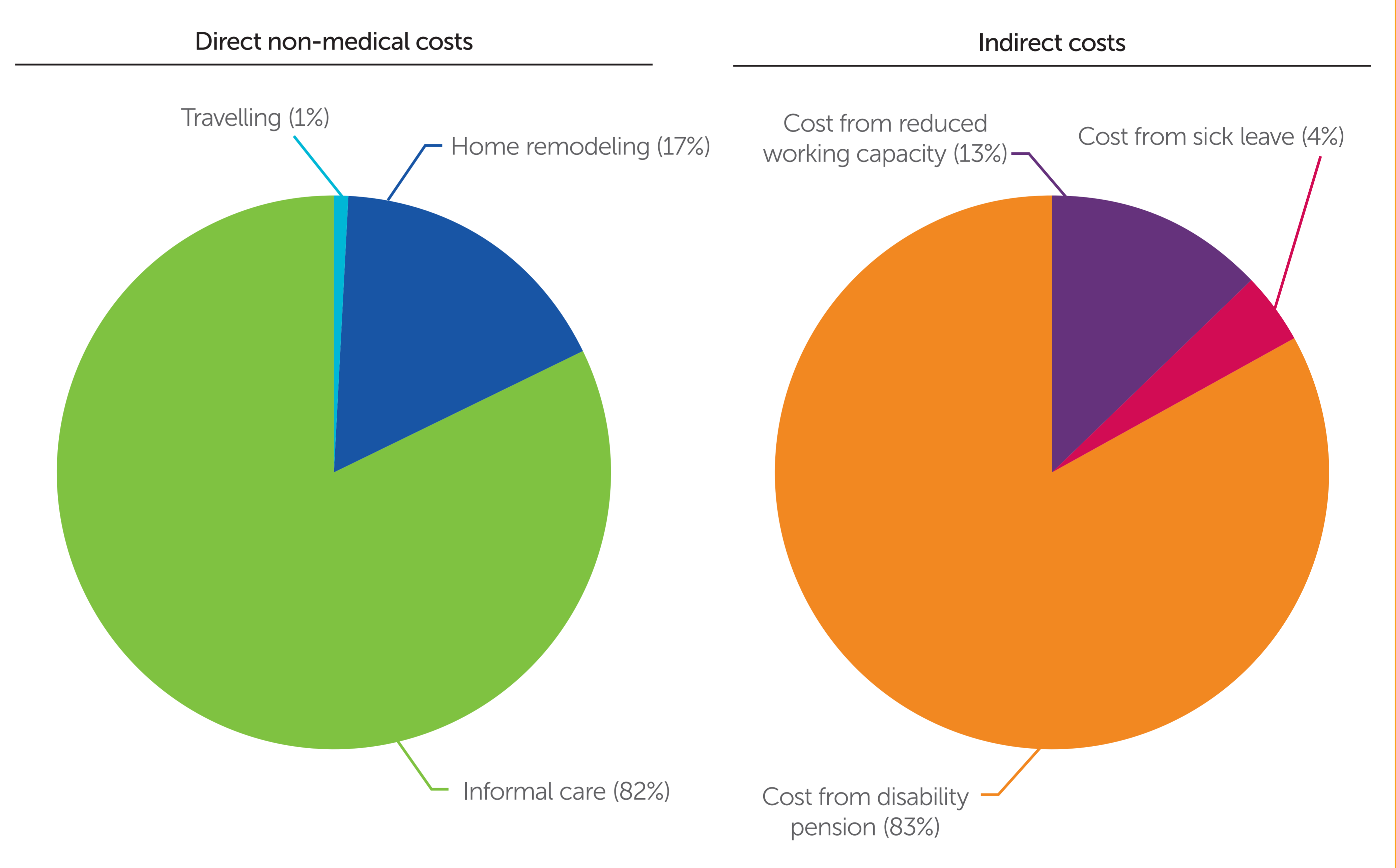


Figure 2. Distribution of different cost types



- Patients used health care services which were not financed by the health insurance system to improve or maintain their health status (private medical examination, physiotherapy, therapy sessions, natural medicine, etc.). Among these services, physiotherapy (40%) and medical spa (52%) were the most common.

Cost

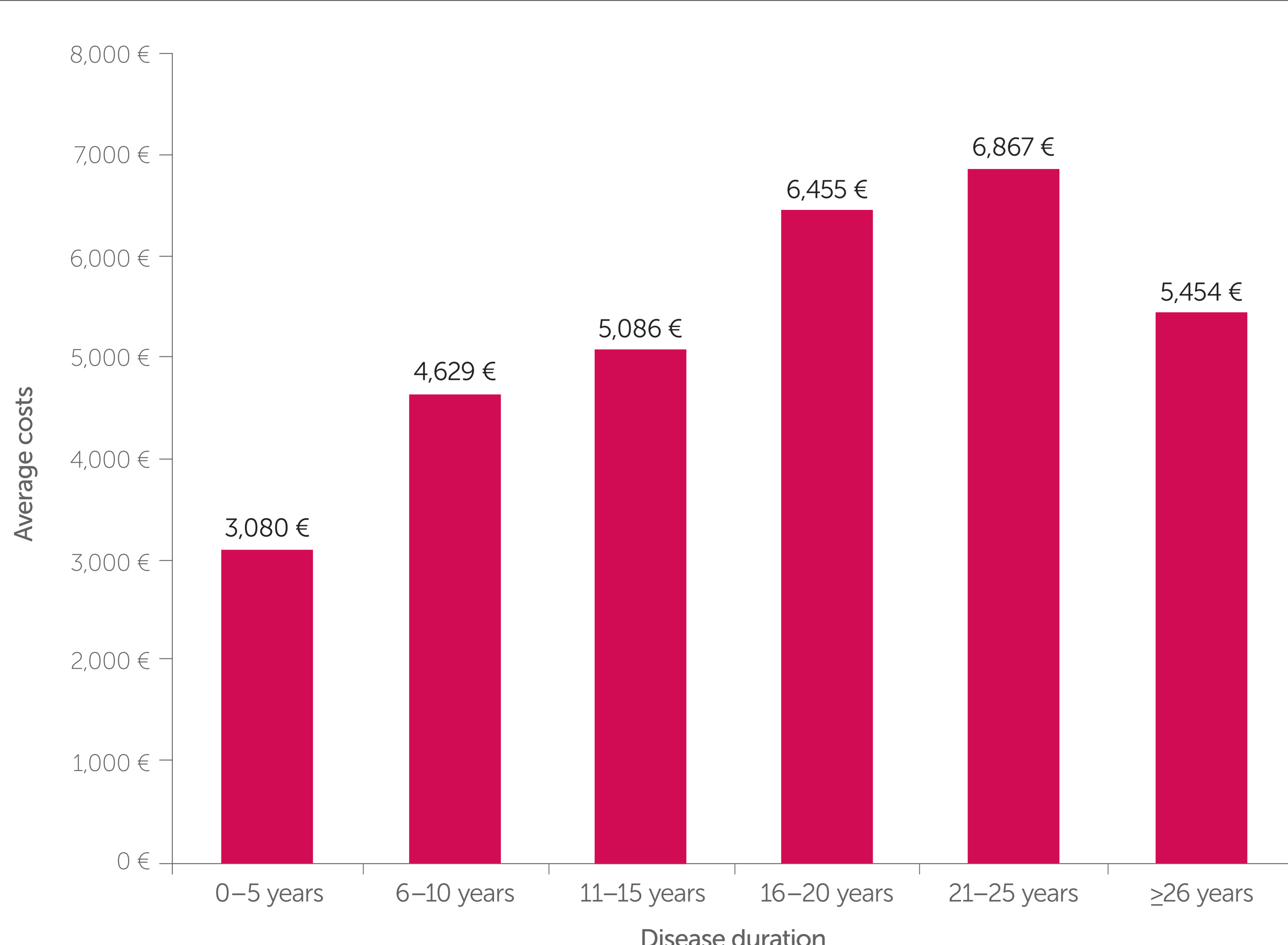
- Average annual total cost was calculated by summing the direct non-medical, indirect and non-reimbursed services costs.
- Cost calculation results showed that the average annual total cost per AS patient was 5,155€ (SD: 5,951€). Within this:

- Average annual direct non-medical cost was 1,992€ (SD: 3,004€; 152 patients).
- Average annual indirect cost per patient was approximately 3,117€ (SD: 4,466€; 145 patients).
- Average annual non-reimbursed health services cost was 182€ (SD: 405€; 130 patients).
- Lost wages due to disability pension generated the highest average annual indirect cost per patient (3,290€; SD: 4,707€; 124 patients).
- The distribution of different cost types within direct non-medical and indirect costs are shown in Figure 2.

Subgroups

- In the working-age population (118 patients, 31–62 years) total average annual cost per patient was 6,302€. The highest cost was generated by changes in ability to work.
- Average costs were higher in cases of longer disease duration (Figure 3) suggesting that the burden of disease increases with worsening of the condition, consistent with more structural damage.

Figure 3. Average costs by disease duration



CONCLUSIONS

- AS is a progressive, chronic disease which leads to continuous deterioration of health status and permanent disability.
- During the average 17-year disease duration, one third of patients become disabled due to AS. Generalizing the results, this means that 0.2% of the Hungarian population² drives 2% of the total disability pensioner population; total number of disability pensioners was 413,000 in June 2014.³
- Higher average costs were associated with longer disease duration.
- Patients may already have dropped out from the employment market in their active ages because of the disease's symptoms and variability, leading to reduced social engagement.

References

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