# Cost of illness analysis of Haemophilia A: resources use and direct costs in Italy

Chiara Cadeddu<sup>1</sup>, Silvio Capizzi<sup>1</sup>, Stefano Capri<sup>1</sup>, Chiara de Waure<sup>1</sup>, Maria Luisa Di Pietro<sup>1</sup>, Maria Rosaria Gualano<sup>1</sup>, Flavia Kheiraoui<sup>1</sup>, Giuseppe La Torre<sup>2</sup>, Nicola Nicolotti<sup>1</sup>, Antonella Sferrazza<sup>1</sup>, Maria Lucia Specchia<sup>1</sup>, Maria Assunta Veneziano<sup>1</sup>, Alessandro Gringeri<sup>3</sup>, Massimo Morfini<sup>4</sup>, Walter Ricciardi<sup>1</sup>, Angiola Rocino<sup>5</sup>

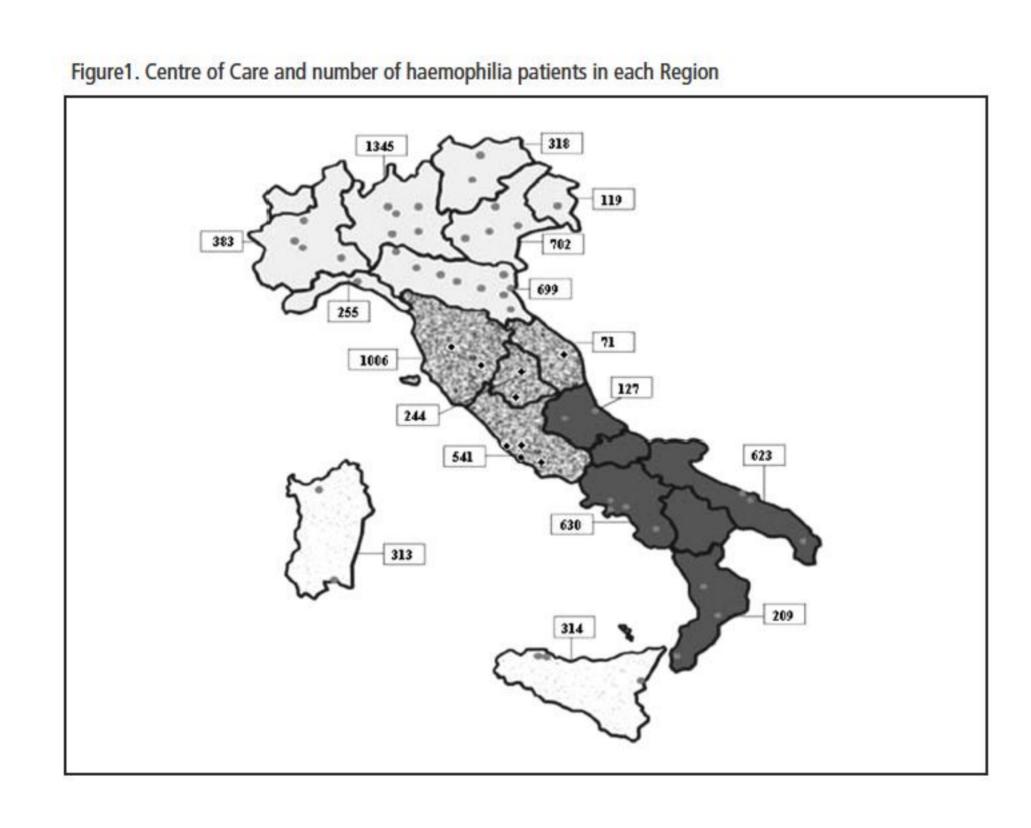
Research Centre of Health Technology Assessment, Rome<sup>1</sup>; Department of Public Health and Infectious Diseases, Sapienza University, Rome<sup>2</sup>; Department of Internal Medicine, University Hospital of Milan<sup>3</sup>; Azienda Ospedaliera Universitaria Careggi, Florence, Italy<sup>4</sup>; Thrombosis and Haemophilia Center, San Giovanni Bosco Hospital, Naples<sup>5</sup>.



## Background:

Haemophilia A is a hereditary bleeding disorder. Its complications (i.e. Chronic Joint disease, intra-articular and intramuscular bleeds and infections) cause morbidity, impairing patients' quality of life.

In 2008, 3.307 boys/men were affected by haemophilia A in Italy.



Patients require lifelong infusions of clotting factor, represented by either recombinant or plasma derived Factor VIII (FVIII), to prevent bleeding.

# Objective:

Estimate the economic impact of haemophilia A in Italy.

### Methods:

AA descriptive cost of illness (COI) analysis was performed from the Italian National Health Service perspective.

Only direct medical costs (therapy with coagulation clotting

factors, hospitalizations, diagnostic exams, physicians' visits and physiotherapy) were included.

Regarding data input, epidemiological data were taken from the Italian Registry of Haemophilia, economic data from National Tariffs Registries.

Medical resource use was measured by utilization of healthcare services at the patient level.

All costs were reported in Euro and adjusted for the inflation, using the Consumer Price Index (January 2010).

Costs	Plasma derived	II generation	III generation Advate
Diagnosis	21.72	21.71	21.71
Drugs	147.420	226.044	245.700
Hospitalizations	2.461,91	2.451,91	2.461,91
OTHERS	220.56	229.56	229.56
Tot. avarange annual costrs per patient	150.133,19	228,7757,19	248.413,19

# Findings:

The COI analysis found that the management of Haemophilia depends on different variables.

The average cost of management of haemophiliacs is approximately € 150.000 and € 248.000 per patient treated with plasma derived and recombinant factor VIII.

The analysis shows that the replacement therapy represents the main cost driver, accounting for 98% of total direct medical costs.

### Conclusion:

The current analysis confirmed that haemophilia A is a rare disease, but a very expensive condition.

The high cost of haemophilia management is due especially to the infusion of FVIII, in particular for patients on prophylaxis.

Few efforts have been made to quantify the economic Burden of the disease in Italy.

Otherwise, it would be necessary to estimate the costs of patients developing inhibitors and to calculate indirect cost in terms of work/school days lost to quantify the complete economic burden of disease.

References:

Castaldo G et al. Clin Chem Lab Med 2007;45(4):450-61.

Abbonizio F et al. Registro Nazionale delle Coagulopatie Congenite. Rapporto 2008. ISS,2010.

C. Negrini, F. Daniele, M.E. Mancuso, G.F. Rivolta, A. Tagliaferri. Implicazioni economiche del trattamento dei pazienti emofilici con inibitori: una revisione sistematica della letteratura. PharmacoEconomics - Italian Research Articles 2006; 8 (1): 33-44 Battaglia G, Gringeri A. L'introduzione del FVIII ricombinante nel trattamento dell'emofilia A: elementi per una valutazione economica. Mecosan 1995; 14: 8 19



