

• Special Issue •

## The Italian System of Free Aids Provision for People with Disability: Future Developments

Maria Teresa Agati, Alessandro Giustini

*Commission of Studies and Research for Assistive Technology (C.S.R.), Rome, Italy*

**Abstract:** The Italian care situation with regards to prostheses and aids is satisfying. The norm which establishes the ways in which aids can be supplied to disabled people goes back to 1999 and, even though it is based on correct principles and even though it has produced positive effects in the improvement of the life of disabled people, it must be updated in the light of the more recent technological and scientific innovations and of the new information instruments such as the diffusion of information and communication systems.

**Key words:** Essential Levels of Health Assistance; list of indispensable devices; customization; standard devices; multidisciplinary team; aid registration

**CLC number:** R496 **Document code:** A **Article ID:** 1006-9771(2011)10-0931-04

**Citation:** Agati MT, Giustini A. The Italian system of free aids provision for people with disability: future developments [J]. Chin J Rehabil Theory Pract, 2011, 17(10): 931-934.

### Introduction

The cultural path has led us to the promulgation of relevant laws and norms for the definition of new rights for disabled people and of consequent interventions that public institutions must implement to render these rights concrete and this means that when the State defines the New Essential Levels of Care, it will also include (for the first time) Assistance with regards to the supply of Prosthetics and Aids.

The New Essential Levels of Health Assistance are defined with a Decree by the President of the Cabinet on 29th November 2001 and enter into force on 23rd February 2002, and constitute all the services and assistance that the national health Service has to supply to its citizens, free of charge or on payment of a participation quota (ticket). The necessary resources come from general taxes.

The Essential Levels of health Assistance (LEA) are organised into three big Areas:

- Collective health assistance with regards to life and work, which comprise all prevention activities directed to the whole community and to privates (protection from the effects of pollution, from risk of accident in the workplace, veterinary health, food protection, infectious disease prophylaxis, vaccinations and early diagnosis programmes, forensic medicine);
- District care, meaning the activities and health and socio-health services diffused throughout local communities, from community medicine to pharmaceutical assistance, from specialists

and outpatient diagnosis to domicile services for the old and seriously ill and to community services up to semi-residential and residential structures (old people's and disabled people's homes, day centres, foster homes and therapeutic communities);

- Hospital assistance, in casualty, ordinary hospitalisation, in day hospital and day surgery, in long term stay and rehabilitation structures, etc.

In district care assistance services, those that are diffused throughout the community, for the first time the supply of aids and prostheses to disabled people is included. This assigns to assistive technology the fundamental role of health intervention, equal to other health services such as pharmaceutical assistance, GP and specialist visits, hospital care. (In Italy all these services are and have been for a long time, at the expense of the national health Service and are made free or with a small contribution by the user that corresponds only to a minimum part -5%~15% of the real cost of the service).

The norm in force at the moment of inclusion of Assistive Technology assistance in LEA was a good norm that guaranteed the supply of many type of aids and prostheses but its new fact imposes a review of the whole system, which will come about on three levels:

- **Presence of all types of essential aids**

A review of the list of supplyable devices, inserting all those types which are considered indispensable to implement the Individual Rehabilitative Projects (for each person with disability a team composed of different professionals must plan a rehabilitation proj-

---

**About the author:** Mrs. Maria Teresa Agati (1949-), teacher, physical therapist, president of the Commission for Study and Research of Technical Aids for Disabled People (C.S.R.), former president of ADM-AREha, vice president of Federvarie (Federation of Industrial Associations) as responsible for relations with the Ministry of Health and the Ministry of Welfare, Member of the Healthcare Commission of Confindustria. She was a member of the Ministerial Commission for the definition of public assistance in the field of technical aids and Coordinator of the Ministerial Board. She is a member of the management team Luca Coscioni, for the rights of disabled people. She has collaborated with the national magazine: "Sole Sanità".

ect that also foresees the prescription of necessary aids).

Coverage of need: all types of aid (indispensable or necessary) for the various situations of disability are contemplated (Francesco Bottiglieri, Health Minister);

- **Review of the descriptions and realisation of the list**

Updated according to the new version of ISO Classification 9999; identification of types (inferior level of Classification: Class. Sub-class, Division + Type = National level) specific to what is going to be supplied; realisation of the list of aids which foresee the registration of make and model of each aid suppliable in each type;

- **Organisation of the types into two distinct categories:**

the devices that need to be personalised and need a complete rehabilitative path, from the prescription to the choice of model to the adaptation of and training in the use of and follow up so that the devices intervene directly on the morphology and on the individual capabilities of the person (such as prostheses, orthoses, posture systems, stabilisers, complex wheelchairs) and "standard" aids where the doctor's prescription is sufficient but the rest of the path is more simple and can be assigned with standardised methods, such as beds, lifts and hoists for the disabled, anti-decubitus cushions and mattresses.....

The path is moreover better defined through which the devices have to be supplied, further specifying that the supply of prostheses, orthoses and aids must come about within the sphere of the rehabilitative project that accompanies the patient from the moment in which the need is identified of one or more aids to the verification of the effects that the aid produces, specifying that the prescribing doctor and the team are responsible for the achievement of the goals for which the aid has been prescribed.

".....The individual rehabilitative project is formulated by the specialist doctor in collaboration with the multi-disciplinary team. The specialist doctor must have the clinical professional competence for prosthetic and rehabilitative treatment in order to guarantee suitability of the assistance."

The individual rehabilitative project must state:

- The indication of the pathology or of the injury that has determined the impairment or disability;
- A functional diagnosis stating the specific impairment or disability;
- The description of the treatment programme with indication of the expected results in relation to use of the prosthesis, orthosis or aid in the middle or long term;
- The eventual devices and professional services necessary;
- The methods and times of use of the device, the eventual need of help or supervision in its use, any possible contraindications and the limits of use for the functional answer;
- The indications of the programme's follow-up methods and verification of the results methods compared to the goals.

- **The responsibility of doctor and his team:** conducting the project and for the periodical verification of the expected results, in the medium and long term, indicated in the project itself.

The prescribing specialist, responsible for conducting the individual rehabilitative project together with the multi-disciplinary

team, carries out verification of the supplied aid; such verification consists in a functional clinical assessment to confirm correspondence of the supplied device with what has been prescribed and its effectiveness in the carrying out of the programme"..... (from the last draft of the Reform of Assistance with regards to Prostheses and Aids in the process of promulgation).

The new norm often underlines the importance of the verification of the obtained results with the use of the supplied aids; after all, the Italian state makes an important investment providing aids free of charge and needs a return on this investment in terms of improvement in the quality of life of the disabled person who, being more autonomous is inserted better in a social context, he becomes less of a burden for society. "Most people with one or more adapted and effective aids regularly go to school or are effectively inserted into the workplace, becoming a resource (and not a cost!) for society.

Old people too who no longer aspire to insertion in the workplace improve their autonomy while a set of suitable aids facilitates the assistance of non self-sufficient people permitting more autonomy to the family who care for them.

This is the important element, especially if we consider the increase in the disabled population in the next fifteen years, which foresees an increase of at least 65% of people with disabilities.

Verification to see if the goal established at the moment of prescription of the aid or of the set of aids has been achieved or not, and to what degree, is important for at least three reasons:

- To obtain confirmation or not of the effectiveness of the supplied solutions;
- To identify eventual corrective interventions that can improve effectiveness;
- To know the real extent of the connected costs.

In international scientific literature, various instruments can be found today that allow us to measure the **outcome** of the supply of aids interventions both in terms of obtained results and of costs.

At the present though, such instruments are not used on such a large scale to be able to identify among these a gold standard that can be proposed as universally valid. The use on a local level of an instrument—choosing among those locally more suitable to be inserted into the work routine—is however recommended, firstly because it introduces a uniform method of quality control of the supply process.

If on one hand the use of such instruments is recommended, as these are perfected, on the other hand, it will be necessary to put into act an appropriate **observation** mechanism based on follow-ups. To be effective, the methods of observation must be programmed in the individualised plan that accompanies prescription of the aid, both in the sense of **what** to observe as in **when** to observe.

A good plan will make forecasts with regards to the presumed clinical duration (for how long does the doctor think the aid or the set of aids will be significant to that particular user) and to the **technical duration** (for how long does the doctor foresee that the single device can last before it breaks irreparably, in the conditions of use of that specific user), and with regards to what timetable are

the moments of observation foreseen taking into account the following indications described by international literature:

- The outcome of the aids—in the sense of the impact on the user's quality of life—is measured not in the immediate but in the **medium-long term**,
- The outcome is examined at least according to four different dimensions, which are the expectations of **the user, the family, the operators, and the community**,
- Eventual failures of the aid can depend on **product imperfections** (a badly packaged or personalised aid, poor technical quality, bad maintenance service etc.) or by **process imperfections** (insufficient assessment in the preparation of the prescription; inaccurate preparation/training for user, his carers and his family; incoherence between the rehabilitative plan and the aid; brief testing etc.),
- A correct analysis of **costs** linked to the aid must comprehend not only the purchase cost but all the material costs (e.g. Maintenance, spare parts) and human (e.g. hours/ men in the family or helpers to manoeuvre the aid) that the aid creates during its cycle of life.

The new list of the devices that can be supplied has been compiled starting from the ISO classification 9999 and taking as criteria the **coverage of need**: taking care that all types of indispensable or necessary aid for the most varied situations of disability are contemplated.

The Nomenclatur is therefore subdivided into 8 **chapters** corresponding to 8 EN ISO classes in which there are the following aids admitted for prescription:

- En ISO 03 Aids for Therapy and Training
- En ISO 06 Prosthesis and Othoses
- En ISO 09 Aids for personal care and protection
- En ISO 12 Aids for peronal mobility
- En ISO 15 Aids for care of the house
- En ISO 18 Furniture and adaptations for the house or other buildings
- En ISO 21 Aids for communication, information and signalling
- En ISO 24 Aids for moving of objects or devices

Chapters relative to ISO 27 class have not been included, Environmental adaptations, tool and machines nor class ISO 30, Aids for free time activity as it has been decided that these categories of aids shouldn't be included in the categories of aids to be supplied free of charge.

For the included classes, a choice has been made among all the subgroups of aids present (subclasses and divisions) identifying only those considered indispensable to respond to real needs of disabled people.

To specify better what precise device is being referred to, also for these new lists an inferior classification has been identified: the type.

Here below is an example of the description system used. The same system is used for all types of devices included.

Class ISO 12—mobility aids
Subclass ISO 12.22—wheelchairs

Aids for autonomous mobility or mobility assisted by a helper

that allow the user to move around while remaining seated. Components that are always present in every wheelchair are:

a) the seating system comprising seat and backrest (preferably in washable material), side, leg-rest and footrest (normally tip-up and always height adjustable); b) the mobility system comprises pushing devices (if manual) or propulsion and driving devices (if motor) as well as brakes; c) the wheels are defined as big if the diameter is > 500 mm, small if the diameter is < 200 mm, medium if the diameter is intermediate; fixed if the rotation axis is restricted to the frame (even if the frame is adjustable to various positions and the back wheel is extractable), pirouetting if the axis is free to roll on a horizontal surface; d) the frame that joins and supports the various parts. The frame is defined as rigid if, apart form extraction of the side panels and leg-rests, does not allow reduction of bulk when the wheelchair is not in use or is being transported;

**reducible rigid** if the reduction is obtained through the fast dismantling of the backrest and rapid extraction of the fixed wheels; **bendable** if reduction in the width of the bulk is possible; **tilting** if the inclination angle can be varied for the seating/backrest system on the sagittal plane. The basic configurations of the wheelchairs described as follows may require the prescription of further structural components in order to realise assembly personalised to the postural, mobility and autonomy needs of specific users.

Indications: non-ambulant people and people with serious mobility problems for which deambulation is clinically unadvised for certain activities (e.g. trips abroad). Combined prescriptions for more than one wheelchair are possible for the same person where they are clearly destined to absolve different functions specified within the individual rehabilitative project.

The architecture of a wheelchair which results from the assembly of its components must be adaptable with precision to the bodily dimensions of the beneficiary, easily supporting the weight under all the foreseen conditions of use, guarantee suitable comfort in the maintenance of the seating position and in the carrying out of daily activities, compensate any postural problems (if necessary, combined with custom made seating and seating systems cod. 18.09.31 or with systems of modular posture—cod. 18.09.39), guarantee the user (in case of autonomous mobility) and the helper (in the case of assisted mobility), effective manoeuvrability. Particularly important is the precision in adjustment of the width of the seat that must be able to offer various possibilities of choice in habitual ranges 20~36 cm (models for children and small adults) and 38~45 cm (for adults).

Larger widths are often associated with particularly heavy users and a prescription must be requested for a reinforced and custom-made wheelchair. Any equipping of accessories must respond to criteria of clinical congruence and to technical compatibility. The wheelchair must be compatible with the environment it is to be used in (with regards to doors, passage and rotation spaces, furniture, slopes, etc.) and with any other aid used in combination with the wheelchair itself (anti-decubitus cushions, communicators, remote controls). The supplier must assure perfect assembly of the wheelchair, accurately adjust the set up according to the indications of the prescription and guarantee every instruction to en-

sure that the user is able to look after ordinary maintenance.

<b>Type</b>	Division ISO 12.22.03—self-propelling wheelchair with two hands on back wheels
-------------	--

#### 12.22.03.009 self-propelling wheelchair on back wheels, extra-light

Indicated for beneficiaries in serious situations or for helpers who use it intensively daily, also outside, when maximum lightness and easy manoeuvrability is necessary. Basic technical characteristics: a) folding frame or rigid reducible, b) structure in composite materials (carbon or kevlar or other) or extra-light extremely resistant alloys, c) two big fixed rapid extraction back wheels equipped with ring push rail, d) two small pirouetting front wheels, e) leg-rests with single or separated footrest., f) clothing protected side panels, g) maximum weight in standard configuration kg 13 (in adult measurements), h) personalised set up through adjustment of seating system (variation of position and inclination with regards to frame) or of the wheels (shifting of back wheel pivot, shifting of front wheel forks, adjustment in fork inclination).

<b>Type</b>	Division ISO 12.22.18—wheelchairs manoeuvrable only with helper
-------------	---

#### 12.22.18.012 Pushing wheelchair with tilting frame and adjustable configuration system of postural support

Indicated for complex postural problems and/or in cases of trunk instability that impose a personalised configuration of the postural support system. Permits the assumption of various positions (seating, extended or other functional positions up to the limits of supine static position). Basic technical characteristics: a) height and inclination adjustable backrest, b) depth and width adjustment of seating, c) padded internal side panels and height and inclination adjustable armrests, d) two medium fixed wheels (or big) with brakes activated by the helper, e) two pirouetting wheels, f) inclination adjustable leg-rests with height adjustable calf-rests and separate and tip-up leg-rests, g) height, depth and angulation adjustable padded headrest.

**N B: for beneficiaries with particularly critical postural problems, the alternative recourse to a modular posture system should be assessed, composed of seating and custom-made seating systems (cod. 18.09.31), mounted on a tilting mobility base (cod. 12.24.06.003 - 006).**

<b>Type</b>	Subclass ISO 12.23—motor wheelchairs
-------------	--------------------------------------

Basic technical characteristics: a) rigid frame or supporting body work, b) rotating seating system, c) autonomous driving by the beneficiary through handlebar, d) four medium wheels with pneumatic tyres of which two fixed in posterior position and two directional wheels controlled by the handlebar, e) automatic braking system with motor and electromagnetic service brake f) electric motors with suitable power to overcome 20% slopes, g) 24 V feed with two dry accumulators with sufficient capacity to guarantee minimum autonomy of at least 5 hours or 30 km in the most difficult conditions of use, h) battery charge with electronic charge control device until automatic interruption, i) horn, safety key, selected speed indicator, front and back headlamps, intermittent indicators, battery charge indicator, j) moveable and depth adjustable handlebars.

#### Type

##### 12.23.03.009 Electronic wheelchair mainly for indoor use

Indicated for beneficiaries who pass a big part of their day mostly indoors. Basic technical characteristics: a) steel-chrome or rigid or folding painted frame, b) four pneumatic wheels with raised sections, two of which pirouetting, c) side panels with padded and extractable or folding armrests with blocking system, d) folding and extractable leg-rests, e) automatic braking system with the motor and electromagnetic service brake, f) electric power motors suitable to overcome slopes of at least 6% for long stretches and at least 15% for short stretches (ramps, kerbs or steps), g) 24 V feed with two dry accumulators with sufficient capacity to guarantee minimum autonomy of at least 5 hours, h) battery charge with electronic charge control device until automatic interruption, i) joystick drive command.

#### Type

##### 12.23.03.012 Electronic wheelchair mainly for outside

Indicated for beneficiaries who pass a big part of their day mostly outdoors. Basic technical characteristics: a) rigid reducible frame or folding in chrome steel or painted or light, high resistance alloy, b) padded seat, backrest, armrests, c) wheels with raised sections not inferior to 26 mm, d) automatic braking system with motor and electromagnetic service brake, e) side panels with height adjustable, extractable or foldable armrests, f) electric motors with sufficient power to overcome slopes of at least 20%, g) 24 V feed with two dry accumulators with sufficient capacity to guarantee minimum autonomy of at least 5 hours or 30 km in the most difficult conditions of use, h) battery charge with electronic charge control device until automatic interruption, i) horn, safety key, selected speed indicator, front and back headlamps, intermittent indicators, battery charge indicator, j) joystick drive command.

**NB:** Within the scope of the individual rehabilitative project, it is possible to prescribe only one type of electronic wheelchair per beneficiary. The prescription of both types of electronic wheelchair described is alternative with regards to prescription of electronic scooters. Based on the clinical and functional conditions of the beneficiary, the prescription of electronic wheelchairs must indicate the type of control necessary (or preferred) for movement of wheelchair choosing one of the following possibilities:

#### Accessories

##### 12.24.03.803 Electronic blow control

##### 12.24.03.806 Electronic head or neck control

##### 12.24.03.809 Electronic chin control

##### 12.24.03.815 Electronic table control

##### 12.24.03.818 Electronic control for helper

**Edited by** Commission for Studies and Research for Assistive Technology (C.S.R.)

#### Contributions by:

Francesco Bottiglieri, Ministry of Health, Planning Department.

Renzo Andrich, Antonio Caracciolo, SIVA, Don Carlo Gnocchi Foundation, Milan, Italy

(Received Date: 2011-09-30)