

# “Continuum Care” in alcohol abuse disorders A manifesto to bridge the gap in personalisation of treatment pathways

*“Continuum Care” nei disturbi da uso di alcol*

*Un manifesto per colmare i gap nella personalizzazione dei percorsi di trattamento*

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## 1. Alcohol: risks and prevention as a continuum

E. Scafato

Alcohol consumption is an important public health problem, and is responsible for 3.8% of all deaths in Europe and 4.6% of disability adjusted life years (DALYs). In Italy, it is estimated that about 8 million drinkers are at risk. Even if per capita consumption of ethanol in Italy has been significantly reduced to about 6.1 litres per year, heavy drinkers have not followed such a reduction. The WHO (World Health Organization) defines heavy drinkers as those whose mode of consumption causes damage to health (daily consumption of alcohol > 40 gm for women and > 60 gm for men).

Of the approximate 8 million consumers over the age of 11 years who are at risk in Italy, it is possible to reconstruct the increasing levels of consumption which, in a continuum starting from zero, are associated with increasing levels of risk, and in the case of persistent exposure organ damage may occur. In Italy, in 2012, about 400,000 men drank more than 5 drinks per day (1 drink is equivalent to 12 gm of alcohol). Over 220,000 are daily consumers considered harmful as they consume more than 3 drinks per day. As a consequence, it can be estimated that 620,000-720,000 individuals over the age of 11 years, who according to the WHO are not only at risk but considering clinically evident damage, are in close proximity to a profile suggestive of alcohol dependence (Fig. 1).

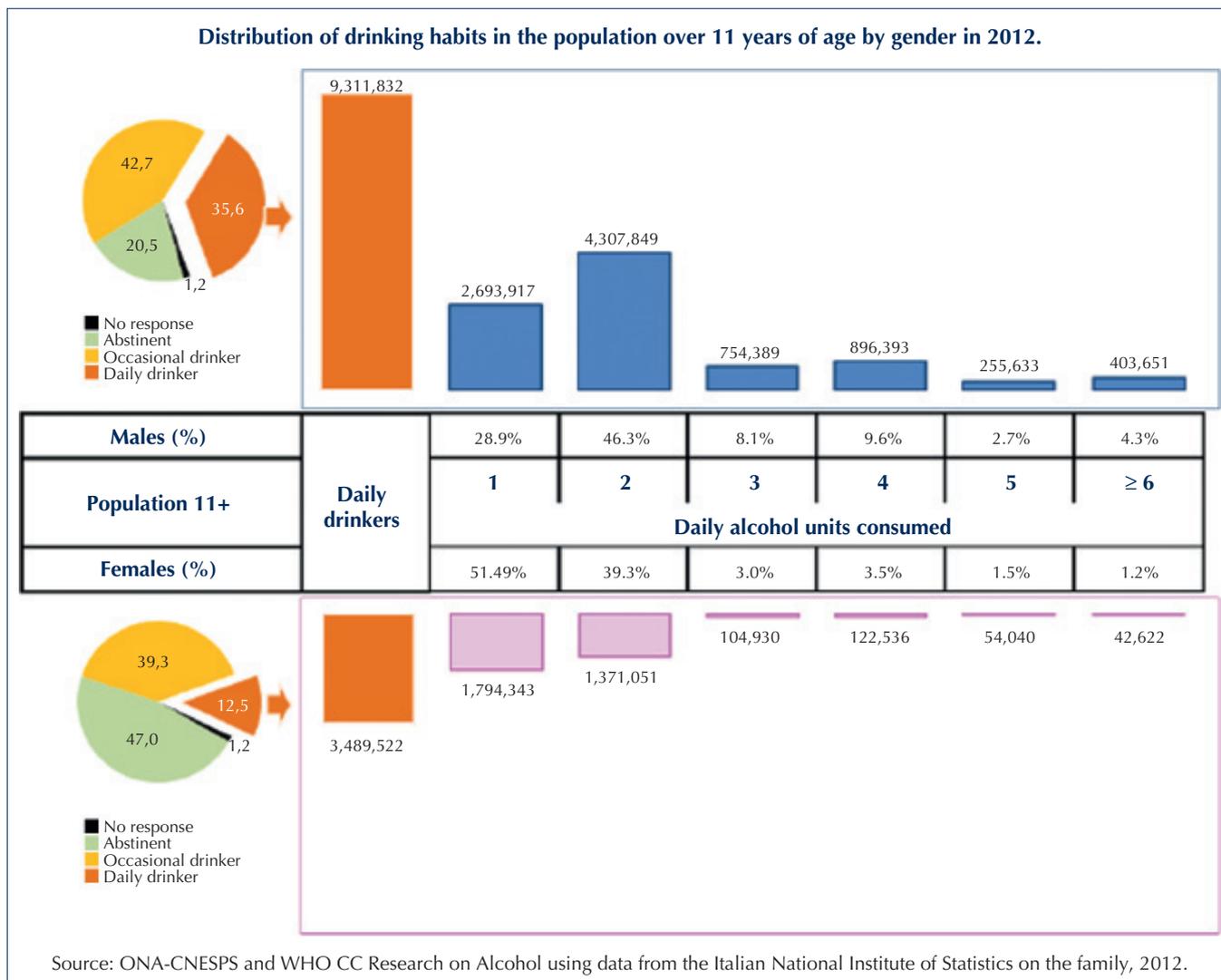
In the current situation in Italy, there is a substantial gap in education among physicians. Considering the level of exposition to risk in the Italian population, about 8 million consumers are at increased risk of which 10% already have

organ damage or alcohol-related diseases. There is thus the objective need to guarantee a system that can utilise the existing network of expertise starting with primary health care through increased awareness and training for screening and early intervention of alcohol-related health risks. Such a system should benefit from the expertise of specialist services, which can assess the possibility to place individuals in specialist programmes for alcohol use disorders and indicate a possible course of treatment and rehabilitation. In diagnostic terms, the DSM-5 groups the harmful use of alcohol together with alcohol dependency, which reinforces the recommendations of the National Observatory for Alcohol of the CNESPS (*Centro Nazionale di Epidemiologia, Sorveglianza e Promozione della Salute*) regarding the need for increased services for alcohol use disorders. In 2012, a total of 69,770 individuals presented to services for alcohol use disorders. During the course of the last 6 years, no substantial changes have been noted regarding the type of clients (new client, current or recurrent user).

There are still about 620,000-720,000 individuals who should/could have sought medical services to receive assistance and/or treatment for problems caused by harmful consumption, suggestive of alcohol dependence or to slow the progression of damage and prevent alcohol-related complications. In fact, “only” 20,623 new alcohol-dependent individuals sought assistance for alcohol use disorders, in addition to the 49,147 alcoholics already under the care of the National Health System. This therefore suggests that there is a large imbalance between the number of clients observed and those expected on the basis of harmful consumption. Each year, no less than

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**FIGURE 1.** Distribution of alcohol consumption habits, 2012. *Distribuzione delle abitudini di consumo, anno 2012.*

5,000 new clients have constantly increased the number of clients with alcohol-related problems from 21,409 in 1996 to 69,770 (more than triple) who refer to structures within the National Health System (which have increased from 280 to 454, or a 62% increase). It should be pointed out that in recent years the number of personnel involved in services related to alcohol abuse has grown less compared with the considerable increase in clients. It should thus be apparent that change is needed. A two-fold approach is needed that addresses both the high-risk population as well as consumers in the general population who are at increased risk. On one hand, the existing gap needs to be bridged between the number of expected alcoholics, those enrolled in alcohol abuse services and harmful consumers, increasing the proportion of individ-

ual identified, and to promote the emergence of alcohol use disorders as an unequivocal category, in order to halt progression of damage to health and prevent complications. In addition, initiatives aimed at raising awareness and promoting the elimination of social and health stigma, while favouring the ability of alcohol-related services to attract individuals with alcohol abuse problems for improved intervention and management. Increased knowledge provides the necessary basis for renewed and more effective prevention and assistance, together with the optimisation of attitudes and adequate training of physicians in order to provide the prevention that is currently missing. The indispensable activity of greater integration in daily practice in Italy should not be limited to primary care, but extended to programmes

of early identification and intervention in other contexts. These include emergency departments, the workplace and social assistance through integration of good European practices as instruments of equity, accessibility and sustainability of the National Health System.

Considering that alcohol-related risk is a continuum in which it would be impossible to have knowledge of modifications in daily consumption or to move a person from a moderate risk category to a high-risk category of alcohol dependence, it would seem evident that the approach used for identification of risk and consequent management should be reconsidered. This is especially true considering that more than 69,000 alcohol-dependent individuals currently in alcohol use disorder services should be intercepted by a network of competencies that still need to be defined in order to obtain access to specialist care. To identify this 'underground' of individuals at high risk for alcohol dependence has value not only in health terms, but it also has a social and human impact. The access to treatment of alcohol-dependent individuals in Italy ranges between 12% of European estimates and 28% of the estimates of the Italian National Health Service. The proportion of individuals should be increased not only through increased availability and accessibility to adequate forms of treatment, but also through a renewed professional approach that favours sensitivity and the ability for early identification of at-risk individuals. This is also considering that increasing access to treatment to 40% of alcohol-dependent individuals would allow for a 13% reduction in mortality each year. At present, less than 30% of alcohol-dependent individuals attending alcohol use disorder services are receiving treatment, and the number of alcoholics in Italy is unknown, in contrast to other countries.

In summary:

- it is of fundamental importance to reconsider and renew approaches for prevention, early diagnosis and treatment of alcohol-related pathologies and problems. This includes the need to increase the number of individuals identified at healthcare structures through innovative programmes and better screening to favour access to treatment;
- there is an objective need to create a formalised network for early identification of alcohol-related risk that includes primary care physicians, hospitals and related services with the capacity for adequate case management;
- there is the need to reorganise services and working groups dedicated to alcohol dependence in order to unite the network of multiprofessional experts to ensure treatment with dignity;
- it is indispensable to formalise and guarantee early prevention and intervention in primary healthcare;
- it is crucial to favour integration of early identification and intervention in daily practice along with epidemiological monitoring;

- the risks associated with alcohol consumption and related damage to health must be adequately communicated to the general population.

## 2. Favouring access to treatment in alcohol abuse disorders: cultural, organisational and relational factors

M. Cibin

Alcohol is one of the most important risk factors for health and is a major cause of death and morbidity; notwithstanding, in Italy only about one-tenth of individuals with alcohol abuse disorders receive therapeutic intervention and specific rehabilitation. An evident criticism is thus accessibility to treatment, which is related in large part to the availability of first-line interventions. Once the patient has 'reached' treatment, the problem is posed of whether or not the treatment is adequate, which is correlated with the drop-out rate.

The 454 services or working groups on alcohol dependence in Italy have less than 70,000 clients, with a mean age of 45.9 years that decreases to 43.9 if only new entries are considered<sup>1</sup>. The majority of the increase in clients over the years is due to patients who remain in long-term treatment, while the number of new clients is relatively unchanged over time. The overall picture considering the available data is that of a heterogeneous system of intervention between different geographic areas in which it is difficult to recruit new patients, and in particular to recruit younger individuals with a short-lived history of alcohol abuse. Many services tend to maintain the current patient load and have difficulty in networking with other services, especially self-help groups.

Considering this background, there is a large number of subjects that need intervention for alcohol use disorders who do not have access to such interventions: it is estimated that at least 10-fold more individuals need intervention than those already receiving care.

The current situation is correlated with several heterogeneous factors:

- 'cultural' factors, stigmatisation;
  - factors related to organisation of services;
  - factors related to the setting of treatment programmes.
- Regarding cultural factors, resistance to entry in treatment is related to personal and social stigmatisation: it is commonplace to view an alcoholic as a person who is marked, morally condemnable, severely marginalised and incurable, and there is also the widespread perception that treatment centres for dependency are receptacles of marginalisation and delinquency. The concept of alcohol use disorder as an 'accident' that could happen to anyone as a result of a risky lifestyle and/or traumatic events undoubtedly helps to overcome such

stigma, as does the awareness that the condition can be addressed and cared for with professional and scientifically validated tools. It is more difficult to deal with the stigma attached to treatment centres: these services are often located in degraded areas from both geographical and relational points of view. In addition, it should be highlighted that patients with alcohol-related problems can only rarely exercise their right to the choice of care, considering the territorial nature of centres for addiction and psychiatric services: cultural issues and factors related to the organisation of services acts synergistically to keep potential patients at a distance.

Among the organisational factors that hinder access of clients, the following should be considered:

- a. distribution of services and availability of treatment, which is characterised by large heterogeneity between regions, especially between northern and southern regions;
- b. approaches to organisation, which are dissimilar both at first contact (e.g. waiting times, fees) and overall setting of treatment programs. Specific pharmacological treatments are definitely underutilised, as are self-help groups and residential programmes.

For the purposes of access to treatment, however, the greatest shortcoming is the scarcity or lack of first-line interventions, which are by definition at the basis of effective management of any problem of epidemiological importance comparable to that of the alcohol use disorders. In terms of first-line intervention, both the general practitioner and specialists involved in treatment of alcohol-related pathologies (gastroenterologists, psychiatrists, neurologists) are fundamental. Current diagnostic and therapeutic tools can be used to propose efficacious interventions that are compatible in the setting of both the general practitioner and specialists, which can be carried out individually or through consultation with alcohol abuse services.

Other factors that can influence access and continuation of treatment are the setting of the programme, and in particular the relationship with the patient. This aspect is fundamental in order for the intervention to be efficacious and to reduce the possibility of early drop-out. As for any therapeutic intervention, this is of particular importance in the treatment of problems characterised by difficulty in motivational and decisional processes. Building a relationship, encouraging changes, supporting self-efficacy are all essential elements of a motivational approach, with the aim of defining together with patients the objectives and course of treatment.

While abstinence from alcohol use and other psychoactive substances would seem to be the most desirable goal, not all subjects have the motivation and personal resources to reach this endpoint. In some cases it is possible to define an objective of reduction, which will nonetheless

minimise the dangerous effects of alcohol while reducing the possibility of drop-out. In the words of Alan Marlatt: ‘If a client is ambivalent toward or resistant to changes, then harm reduction ... gives us an opportunity to build a relationship and help our client make steps in the right direction ... Reduction therapy means meeting the clients where they really are’<sup>2</sup>.

### 3. Desirable vs achievable goals in intervention

#### A. Mosti

In alcohol abuse services, it is not infrequent, when faced with the ambivalence of patient who is seen for the first time, to ask: “Why did this person come to us if he is not motivated to face his problem? Is he not aware of the problems caused by his alcohol consumption? Why can’t he ‘admit’ his condition even if his family brought him here? And, especially, if he doesn’t want to completely stop drinking? Maybe he is only here to get a certificate for some reason, maybe to satisfy his spouse or to see what would happen once you cross the threshold of that strange place where ‘they want you to stop drinking!’ and see where your ‘drinking buddies’ have been”.

In these circumstances, the tone of the first meeting can be decisive for engaging in a possible treatment aimed at improving the state of health and prevention of alcohol-related harm. One of the most common attitudes in the field of addictions has been to separate patients into ‘motivated’ or ‘unmotivated’. In particular, an unmotivated person is usually challenged with a confrontational type session, characterised by emphasis on the negative aspects and the danger of the situation and on the negative consequences for the person in terms of health, family and social life, in addition to moral and legal problems associated with addiction. There is no doubt that individuals with addiction problems have serious problems with compliance, almost as if they ‘do not want to heal’. At times, they seem to have full knowledge of their problems and, a moment later, may deny them. Faced with an ‘unmotivated’ person, who is so ambivalent, who pretends to want to change but who shows contradictory behaviour insisting that ‘drinking isn’t a problem, and that all considered it’s true that sometimes he drinks too much – just like everyone – but in reality he can quit whenever he wants’, approaches based on motivation for change seem to have opened a new horizons and provided effective operational tools such as the motivational interview<sup>3</sup>.

In counselling relationships, according to the motivational interview, what the operator says should be able to elicit either a determined reaction or a reaction that is diametrically the opposite. This doesn’t happen by chance. The operator carefully considers the position of the patient in an ideal process that ranges from lack

of motivation to change to full readiness to change<sup>4</sup>. In motivational interviewing, the tone of dialogue is based on listening to the person, on the total acceptance of the state of change in which the person is and on the level of commitment at that moment. Neglecting the conditions of the patient brings about a retreat to defensive positions with increasing resistance to change, and often to abandonment of the therapeutic relationship.

### *... there's always something to do ...*

In the spirit of the motivational interview, the operator should never say: "Or stop drinking now or there's nothing to do". Even at the stage defined as pre-contemplation, when the willingness to change is not maximal, because the patient does not even seem to have a perception of the problem, the operator should be empathetic and act as a relational reference point. At the same time, the operator should be careful to take advantage of occasions to evoke recognition of the problem and any concerns that the person brings in relation to it. There is a phase in which an attitude of ambivalence remains, which if accepted without reservation by the therapist can be used for the benefit of the patient and allow consolidation of decisional processes in the direction of change.

### *... I can't change you, but if you want I can help you to change ...*

One of the main principles of motivational interviewing is to 'enhance a sense of self-efficacy' and thus the 'confidence that people have in their ability to implement a pre-determined behaviour, to achieve a specific goal in a specified time'<sup>5</sup>. Another basic characteristic of the motivational interviewing approach is autonomy: the operator supports the right and the ability of the patient's own self-determination and facilitates informed choices. On the other hand, no one except the interested person can change! Supporting the responsibility of decision means, in other words, to believe that people are able to decide for themselves.

In this light, what can represent a partial result for the operator (e.g. reduction of alcohol consumption rather than abstinence) is the only objective which is, for the patient, at this moment, possible. Working together to reach this goal can be decisive for consolidating the only indispensable condition for any programme of change: the therapeutic alliance.

## **4. The mutual aid group in providing a continuum of care**

A. Baselice

The scientific literature and experience in the field have always highlighted the key role that self-help groups have in treatment of alcohol-related problems. The two

largest organisations for mutual aid and for a scientific and multifamily approach in alcoholism are the 12-step programme (about 1000 groups in 12 countries; AA, Al-Anon, Al Ateen)<sup>6</sup> and the social-ecological approach (about 2000 groups; Club Alcologici Territoriali, CAT, Territorial Alcohol Clubs)<sup>7</sup>. These two types of non-institutional group interventions have a fundamental role within a collaborative relationship and are built with the network of public alcohol abuse services, both territorial and hospital-based. The goals of both types of intervention include: increasing the individual's ability to confront problems (empowerment)<sup>8</sup>; increasing self-esteem, skills and confidence in one's resources; help participants to express their emotions; stimulate reflection about one's behaviour; facilitate new friendships<sup>9</sup>. In these groups, confrontation and interpersonal sharing allows leaving behind egocentric behaviour and relational closure, and to re-establish intra/extra-family relationships<sup>10</sup>. The orientation is towards action 'here and now' in a group situation. Communication is horizontal and among equals. The level of interaction and responsibility are personal aspects<sup>11</sup>. Even if some of the founding principles and operating aspects are in common, the 12-step programme and the social-ecological approach have significant differences regarding some objectives and working methods. According to the social-ecological approach, alcoholism is a complex and multidimensional phenomenon produced by the bond between alcohol and man, and can be caused by bio-psycho-social disorders (complex alcohol-related problems) in an individual, family and even local community<sup>7</sup>. This premise is in complete harmony with the hypothesis of E. Morton Jellinek<sup>12</sup>, according to whom 'alcoholism is any use of alcoholic beverages that provokes damage to the individual, society, or both'. Thus, alcoholism is a variable and complex disease phenomenon seen as an entity that can be attributed, from a nosographic standpoint, to an advanced and irreversible stage of the continuum of the relation between an individual and a substance and classified by the DSM-5 as 'Alcohol use disorder'.

The interaction between people from different types of families favours emotional re-elaboration that produces a consequent cognitive and behavioural redefinition. Such a change has its foundation in neuro-physiological neuro-plasticity, or the ability of the brain to change its structure in response to experience<sup>13</sup>. In this way, it is possible to develop effective coping strategies to confront craving and to develop a sense of self-efficacy in the search for motivation and possible maturation of an "alcohol/drug-free" behaviour towards an increasingly careful and profound reflection about the meaning of life<sup>14</sup>.

The AICAT national database, realised in collaboration with the Institute of Clinical Physiology of the CNR at

Pisa during 2005-2006 showed that permanence of families with alcohol-related problems at the CAT (Territorial Alcohol Clubs) drastically reduced at-risk alcohol-related behaviour, and also led to an unmistakable reduction in other risky behaviour (illegal drugs, use of psychotropic drugs, and to some extent cigarette smoking). This demonstrates the enormous potential of the CAT (Territorial Alcohol Clubs) in facing many other problems that are not of lesser importance<sup>15</sup>.

In light of these characteristics, over the last 15 years, the CAT (Territorial Alcohol Clubs) have in fact dissociated from the common types of mutual aid groups, while retaining some relevant elements. More than being a mere instrument of treatment, of outpatient or residential ‘after-care’, the CAT (Territorial Alcohol Clubs) have experimented in early approaches to alcohol-related disorders that precede those diagnosed as advanced or serious, by anticipating and embodying a strategy according to a mode of continuum of care in alcoholology<sup>11</sup>.

In fact, an increasing number of individuals and families at CAT (Territorial Alcohol Clubs) present with a situation of pre-contemplation of an at-risk condition that is lower or less advanced. In these situations, the CAT (Territorial Alcohol Clubs) propose a course of research for motivation to change that requires time, that is not foreseeable or preventable, for maturation of choice and achievement of an alcohol-free state. The CAT (Territorial Alcohol Clubs) are increasingly a laboratory for best practice for protection and promotion of health and a better quality of life, even for those who do not consider themselves ‘alcoholics’, but who are concerned about their relationship with alcohol<sup>16</sup>.

In this vast and complex horizon, the working methods of CAT (Territorial Alcohol Clubs) compare and interact, in a completely nonspiritual manner, with all possible pharmacological intervention protocols used to support a process of emancipation from alcohol-related suffering. The necessary synergy with specialised medical-pharmacological approaches, which are fundamental considering the increase in comorbidities, does not exclude the possibility to formulate critical judgement regarding pharmacological approaches that according to the social-ecological viewpoint do not favour emancipation from a condition of chemical dependence. Such a position arises from the awareness that it is not the drug, but the person, who is at the strategic centre of a process of maturation and resolution of the bond with alcohol, and overcoming a lifestyle related to it.

This is a vision that has scientific basis in new evidence offered by progresses in neuroscience demonstrating that neurobiology has a fundamental structural relation, and for this reason is based on the integration of the body, mind and brain<sup>13</sup>. The goal of this vision is not simply to attempt to reduce or remove symptoms

because a patient does not fit a determined diagnostic classification. The aim is to provide tools to create a healthy life that is better integrated with oneself and with interpersonal relations, a well-being in the name of complete self-realisation<sup>17</sup>.

## **5. The need to overcome the dichotomy “reduction of risky drinking-abstinence”. The advantages of a philosophy of intervention that does not aim at immediate disengagement from alcohol**

I. Maremmani

Among the various dichotomies that limit an effective approach to the problem of addiction, one of the most prominent is “integrated treatment versus reduction of damage”. For years, these two strategies have been considered as opposite poles of different philosophies of intervention, one bound to the search for methods that lead the subject to complete abstinence, while the other prioritises a decrease in the use, with maximum reduction in the damage correlated with its use<sup>18</sup>.

Supporters of harm reduction argue that this approach is desirable at any rate, promoting for each individual the opportunity to improve their health and reduce the risk of practices of abuse. Critics argue that this practice is useless as it does not intervene on the pathophysiology of the disease, maintaining the positive reinforcement of the intake of the drug and course of disease. If, however, these considerations are questionable for drugs, they cannot be applied to alcoholism. Sometimes the introduction of pharmacotherapy can facilitate the integration of these two different approaches to the problem<sup>19</sup>. Alcohol dependence remains an underdiagnosed and undertreated condition. The difficulty in treating subjects with at-risk drinking, but who are not yet severely alcohol dependent, is often the will of the subject himself, who does not want to immediately stop drinking even when he knows that a reduction in alcohol consumption is desirable.

The therapeutic agents used up to now have focused on pharmacologically-assisted detoxification of alcohol-dependent patients and long-term psychosocial treatment of detoxified subjects, or the use of drugs to prevent or delay relapse to alcohol in detoxified subjects. To date, no drug has been proposed to obtain a reduction in drinking. A reduction of alcohol intake in patients with alcohol use disorders can be considered an intermediate objective towards complete abstinence in those at risk of physical and psychological complications in severe alcohol dependency (reduction of risk of disease progression and/or damage).

The process of acceptance of harm reduction in alcoholism begins with the following findings: alcohol

consumption, when high (> 1 unit in women and > 2 units in men), is one of the most important risk factors for disease; the risk of death increases with the alcohol intake in an exponential manner; at-risk drinking has negative consequences on the socio-environmental condition (decreased productivity, disruption of meaningful relationships, violent and criminal behaviour in the family and the social environments, increase in injuries), with an exponential trend that is related to alcohol intake.

Progressive increase of alcohol consumption is the greatest risk factor for alcohol dependence, which in turn is responsible for most psycho-physical complications and social issues related to drinking. Reducing the intake of alcohol means, therefore, to reduce the risk of developing addiction.

Reducing alcohol consumption has an immediate positive impact on the health of the at-risk drinker. Immediate improvement is seen in sleep disorders, mood abnormalities, problems related to poor nutrition and blood pressure, which are enormously influenced by heavy drinking. It also lowers the risk of cirrhosis, cancer, cardiovascular complications, osteoporosis and pancreatitis, with a decrease in costs associated with the physical and mental complications of alcoholism. In addition, subjects who greatly reduce the use of alcohol and those who completely interrupt the assumption, generally show the same benefits in terms of social adaptation.

Reducing alcohol intake without achieving complete abstinence is not, therefore, a renouncement to treat the disease. It is possible to consider this type of intervention as an intermediate resource, which can lead over time to complete abstinence from alcohol. Many patients who have agreed to reduce their drinking, thinking at first that this was their goal, changed their minds over time to reach complete abstinence.

The availability of opioids and anti-reward and anti-dysphoria drugs render harm reduction in alcoholism simple to implement, especially if accompanied by psychosocial support, thereby offering a valid integration with treatments oriented towards complete abstinence, according to the following principles:

- many patients prefer to not completely abstain from alcohol, even if they are aware of the risks;
- reduction of alcohol intake represents an additional low-threshold treatment that is non-stigmatising and flexible;
- the results of interventions aimed at alcohol reduction can be as successful as immediate interruption of drinking;
- reduction of alcohol intake is guided by an appropriate strategy in many guidelines for the treatment of alcoholism (EMA, NIAAA, NICE);

- reduction of alcohol intake does not require any particular setting, but does require the collaboration between the general practitioner, specialised services for addiction, alcoholology services and psychiatry.

## 6. Role of neurobiology in the possibility to use a continuum of care

G. Biggio

The development of brain imaging using morphological and functional magnetic resonance, along with images of neurons obtained with super-resolution confocal microscopy, have provided exceptional information on the dynamic and plastic properties of neurons.

Imaging technology, in fact, has demonstrated that neurons are extremely dynamic and plastic cells, with the ability to modify their morphology in real-time and express fairly marked specific membrane protrusions (dendritic spines), in order to enhance or reduce, depending on specific needs, synaptic activity in specific areas of the brain to alter mental functions modulated by those neurons and synapses. At the same time, our understanding of epigenetic mechanisms that control gene function has also provided outstanding information regarding the molecular events through which environmental factors can influence important brain functions. In fact, epigenetic studies have shown that environmental factors can influence gene function and expression of receptors, transporters, various peptides, etc., and has made substantial contributions to knowledge of neuronal function with significant therapeutic implications. These technologies have also been used to study the effects of substance abuse on gene function and morphology and function of neurons, and have opened new horizons of research aimed at better understanding the biological mechanisms involved in the onset of addiction and its treatment.

This research has allowed for the understanding that all abused substances can cause both short- and long-term changes in the function of specific genes that control the activity of selective neuronal populations involved in the modulation of cognitive, emotional and affective function. For example, alcohol, one of the most widely used substances in youth, together with cannabis, has damaging effects on the brain. Even moderate doses can induce functional modifications of specific genes in brain areas such as the nucleus accumbens, amygdala and ventro tegmental area that control pleasant stimuli and gratification, in addition to the prefrontal cortex which has inhibitory control of decision making regarding pleasant or unpleasant impulses. Results at the morphological and functional levels, along with clinical

studies, have allowed us to better understand previously unknown neurobiological mechanisms.

A good example of the importance of these studies, considering damage associated with addictive substances, including alcohol, is the discovery that: a) in both sexes the brain becomes adult when the prefrontal cortex, the area that processes decision to try (or not) a certain substance, reaches its maximum thinness (23-25 years in females and 26-28 years in males), while b) the nucleus accumbens, which controls gratification, motivation and pleasure in the adolescent has a volume approximately twice that seen in adult subjects. This anatomical data is of crucial importance for understanding why adolescents are more vulnerable than adults to become addicted and consume excessive amounts of alcohol. In fact, the lack of effective inhibitory control by the prefrontal cortex at the time when the pleasure nucleus is still overdeveloped constitutes an element of elevated vulnerability for the adolescent towards psychopathology.

The excessive consumption of alcohol in the range of 10-28 years can thus represent an elevated risk for neuronal toxicity. In fact, even at moderate doses alcohol inhibits neurogenesis (proliferation, development and survival of neurons), which is extremely active in the brains of children and adolescents, thus reducing neuronal plasticity and inhibiting the formation of dendritic spines and synapses. The effects, mediated by the epigenetic processes of methylation and acetylation activated by ethanol at specific genes, can justify the greater vulnerability of adolescents to become chronic drinkers. The evidence that alcohol, like all addictive substances, induces changes in gene function that are difficult to revert, suggests that it is crucial to have pharmacological and non-pharmacological approaches to favour early prevention and reduce the intake of alcohol.

The above-described neurobiological data suggest the critical importance of activating, at both the social and medical levels, early prevention mechanisms especially towards younger individuals through effective information programmes and training, in addition to adults who abuse alcohol. The evidence that alcohol has a high level of toxicity at both the genetic and neuronal levels should prompt creation of programmes focusing on reduction of alcohol consumption, even in subjects who are not alcoholics, since it is potentially toxic even at moderate doses. The evidence that neurons, through modulation of gene function, are extremely sensitive to the action of both drugs and environmental factors highlights the importance of using pharmacological therapies in combination with effective psychosocial support programmes to ensure an optimal continuum of care in the treatment of alcoholism.

## **7. Role of impulsivity and the psychiatric approach in the continuum of care of the patient with alcohol use disorder and a dual diagnosis**

C. Mencacci

The therapeutic approach to alcohol dependence is complex and varied, and is characterised by a range of clinical sensitivities that should give rise to a specific and individualised approach in each patient. The complexity of intervention reflects the multifactorial nature of alcohol dependence. The use of alcohol typically begins in early adolescence, and the amount of alcohol consumed tends to increase around 20 years of age, decreasing in adulthood with the acquisition of a social and working role<sup>20</sup>. Such a longitudinal scheme is not followed in alcohol-dependent subjects. In the attempt to describe the evolutionary trajectories in the use of alcohol, with the aim of defining a taxonomy of dependent behaviours, several groups of subjects have been defined based on alcohol consumption. In particular, four subgroups have been identified: i) antisocial alcoholism; ii) developmentally cumulative alcoholism; iii) developmentally limited alcoholism (limited over time); iv) negative affect alcoholism (secondary to modulation of negative emotions)<sup>21</sup>. In contrast, four trajectories have been correlated with alcohol use: i) no tendency to abuse; ii) patients with infrequent abuse; iii) patients with early onset; iv) patients with late onset<sup>22</sup>. Globally, in identifying the causes and possible outcomes of the use of alcohol at a young age, in general the age of onset and frequency/intensity of use are both associated with poor prognosis. Focus has also been placed, however, on the analysis of which variables correlate with the various trajectories of abuse, and to identify variables that can predict such behaviour. Among the variables at a young age associated with alcohol dependence, in an adult age, the following have been noted: male gender, family history of dependency, temperamental behaviour of high impulsivity (high novelty seeking, low harm avoidance), behavioural alterations and presence of psychiatric symptomology (anxiety spectrum disorders or predominately affective).

Alongside these individual variables, the role of peers should be highlighted (which tends to increase all impulsive behaviours). These data suggest that a patient predisposed to alcohol dependence is a patient with a particular individual constellation of factors and who presents some form of distress/mental suffering. In this regard, data on comorbidities are interesting: almost 30% of patients with a psychiatric diagnosis have a positive history for alcohol abuse/dependence<sup>23</sup>. Comorbidity is found not only between psychiatric disorders and alcohol dependence, but a cluster of dependencies has been found,

including both physical and behavioural dependence, which suggests a common predisposition to addictive behaviours, in turn associated with a particular biological-temperamental constellation<sup>24</sup>. Significant overlap has recently been found between alcohol dependence and the major psychiatric disorders, providing the basis for the concept of comorbidity and dual diagnosis: in this light, the use of alcohol falls within the broader context of the modulation of mental state of an individual<sup>25</sup>.

An important theme, which can provide a theoretical basis for the high levels of comorbidity between various forms of addiction and psychiatric symptomatology, appears to be related to the potential effects of risk of these conditions due to early exposure to traumatic factors: much attention has focused on the role of physical and sexual abuse in the development of alcohol dependence<sup>26</sup>. Expanding the horizon, more recently, researchers have begun to consider how exposure to factors (even non-traumatic) is capable of causing epigenetic alterations, and how such factors are linked to late development of alcohol dependence. In this case, the question of alcohol addiction is part of a larger broader consideration related to early development factors associated with cerebral changes that predispose to subsequent psychiatric symptoms or alterations in behaviour<sup>27</sup>. The interaction between genetic susceptibility and environmental factors may influence an imbalance in the genetic control of corticotropin-releasing factor, the hyperactivation of which favours development of alcohol dependence<sup>28</sup>.

All of the above considerations support clinical experience and reinforce the knowledge that alcohol abuse or dependence tends to manifest as a behavioural response to a psychic signal/malaise, adding to other forms of abnormal behaviour that are often associated with dependence (self-harm, other forms of addiction). Even the relational link between alcohol abuse and impulsivity, which has been identified as one of the endo-phenotypes correlated with late development of dependence, is very important from a clinical viewpoint and reveals how alcohol can be used as a tool to overcome situations that are deemed difficult to overcome with coping skills alone: alcohol, in fact, can act as a “social lubricant” that helps the individual to overcome inhibitions or social phobias, reduce anxiety and favour affective dissociation (e.g. renders sexual relations easier without affective impairment). Likewise, the presence of anxiety symptoms or depression is often a decisive factor in the use of alcohol as an easy solution to complex situations: in fact, alcohol has an anxiolytic effect (which aims to lessen the sense of inability, self-esteem deficits, difficulties in achieving a standard level), anaesthetic/pain relief effects (e.g. used during mourning or to tolerate frustrations and failures) and antidepressant and euphoric effects.

Careful psychiatric screening of subjects with alcohol

abuse or dependence (especially in minors and young adults) would allow for recognition of psychic pathologies that often remain silent, hinder treatment and prognosis, and lead to a self-maintaining vicious cycle. Alcohol abuse, as a visible sign, is also a signal that should lead adults to question their role as an adult and as a guardian of the young, in fact exposing a background of mental suffering.

## 8. New concepts of acceptance and care of patients with alcohol use disorders in addiction services

C. Leonardi

Local/territorial services for addiction (SD) are health-care structures that are involved in dealing with any problem concerning the use, abuse and dependence on illegal and legal psychotropic substances. SD have recently extended therapeutic interventions to addictive behaviours that do not involve substance abuse. In summary, their job is to provide interventions for prevention, diagnosis, care, health promotion and rehabilitation of people with disorders related to addictive diseases. A team of addiction experts works within an SD: doctors, psychologists, sociologists, social workers, educators, nurses and healthcare assistants, who can provide knowledgeable answers that are tailored to the different needs of individual patients and their families. Among the specific duties of the SD, it takes part in diagnostic ‘treatment’ of the patient in order to identify the most appropriate multidimensional therapeutic strategies, which can also be provided by accredited public and private local services. In general, treatment of alcohol use disorder can be carried out within the structures of the SD, which are often organised in specific units for alcoholology. In SD within larger departments, the Alcoholology Unit can be located in a different structure.

Continuity of therapy and territorial networking are essential elements in treatment of alcohol use disorder and individualised treatment. Therapy should include diagnostic-therapeutic support by the SD together with hospitals, mental health departments, general practitioners, pharmacies, social services, regulatory and legal systems, mutual aid groups and community rehabilitation.

Given these premises, it is clear that the endpoint of any alcohol-related therapeutic project should be directed by personalisation of treatment and, above all, as a natural evolution of individualised therapeutic strategies. It should not be obsessively characterised by achieving an immediate alcohol-free state, which considering the psychopathological profile of the alcoholic will certainly result in treatment failure in some individuals. While achieving a state of abstinence is relatively easy for mo-

tivated patients, for others it is a goal that is difficult to reach and should be gradually introduced through a preliminary process of stabilisation of symptoms and craving of alcohol. As a consequence, immediate improvement of the patient’s overall conditions and quality of life can be attained.

This new mode of interpreting the treatment plan for an alcoholic is different from an ideological and stereotyped approach to cure drug addiction and is oriented towards defining a continuum of care that involves all members of the therapeutic network in the process of individualisation of therapy for alcohol use disorders. The treatment plan needs to take into account the therapeutic needs of the patient, his family, social situation and, above all, the different historical phases of the addiction and relationship with the substance.

At present, therefore, overcoming alcohol addiction should be built upon new capabilities and therapeutic opportunities that must not harm the real and tangible needs of the patient. It should promote the process of voluntary change through pharmacological interventions aimed at social control, “step-by-step” improvement in health, reduce risks related to alcohol and the achievement of a state of sobriety through reduction in consumption. This new bio-psycho-social approach, in which the concept of reduction vs. abstinence is intensely strategic within any course of treatment for alcohol use disorders, can provide new opportunities for personalised care, and should be adopted by all those involved in the treatment network, including the SD.

Such an approach can be considered decisive both from mental and biological points of view. At the mental level, it is useful in all patients whose motivational phase is still in that of “pre-contemplation”. This allows them, in the short-term, to stabilise the compulsive use of alcohol within acceptable parameters without having to accept a therapeutic target based solely on achieving a state of abstinence and to create a motivational substrate for a more lasting and stable subsequent course of treatment. At the biological level, it strategically addresses the frequent condition called “cognitive anosognosia”, or the dramatic functional limitation of the prefrontal cortex that is responsible for the lack of awareness of the condition in the compulsive alcoholic which leads the individual to unknowingly disavow or minimise the problem and severely limits compliance to therapy in the early stages.

It would thus appear evident that together with multidisciplinary therapies of the SD, pharmacotherapies based on deactivation of receptors sensitive to the action and control of alcohol and alcohol-related dysphoria can offer a valuable tool to help the alcoholic within a therapeutic alliance to minimise the effects of the “first glass” and favour a gradual reduction of com-

pulsive drinking. Modulators of the opioid system with distinct antagonistic effects on  $\mu$  and  $\delta$  receptors, associated with the partial agonism on  $\kappa$  receptors, in addition to allowing individualisation of treatment on the above-mentioned assumptions, are particularly appropriate because, thanks to their pharmacodynamic properties, do not pose any risk of an additional neuro-psychotropic effect between alcohol and drug itself.

## 9. The role of residential programmes in the continuum of care

M. Cibin

Interventions in alcohol use disorders are generally provided in three types of structures: i) out-patient settings; ii) residential facilities; iii) mutual help groups (AA, CAT). It has long been held that these interventions should be seen as separate and not overlapping: the present vision, however, is that of a continuum of care, or the synergy of different approaches in building a coherent course of accessible and effective treatment. In Italy, residential treatment for alcohol use disorder is available as: i) hospital admission for detoxification; ii) rehabilitative hospital-sponsored programmes; iii) community therapy programmes. The uniqueness of community therapy compared with other types of programmes lies in their greater personalisation of intervention in terms of duration and objectives, in addition to a focus on a sense of belonging and personal responsibility, which is especially valued as part of an equal relationship that characterises community life <sup>29</sup>.

Persons with alcohol use disorder can be classically divided into two groups: i) Cloniger type 1 <sup>30</sup> in whom the dependence arose in an adult age and is correlated with life events; ii) Cloniger type 2 in whom the dependence arose in adolescence, has a genetic basis, and is associated with impulsive traits and antisocial/borderline personality disorder. In both cases, in the pathogenesis of addiction, traumatic events play a role: in type 1, they occur in the form of isolated trauma in adulthood, while in type 2 they are linked to repeated childhood events that affect a genetically predisposed individual.

With regards to residential programmes, in type 1, a short program is indicated that contains, in addition to the parts most closely related to addiction (motivation, relapse prevention, facilitating self-help), post-traumatic psychotherapy (exposure therapy, emotional release, mind-body interventions) <sup>31</sup>. In the treatment of type 2, however, the focus is on association between personality disorder and substance use: programmes that combine these interventions for dependencies with specific interventions for personality disorders are therefore indicated. In light of these considerations, the ideal residential pro-

gramme for alcoholism should include an initial diagnostic/motivational part, on the basis of which patients can be assigned to a “post-traumatic” treatment (type 1) or treatment for dependencies/personality disorders (type 2); these therapeutic phases can be followed, if necessary, by a rehabilitative phase focusing on the acquisition of social and working skills. Currently, in Italy, only ‘fragments’ of the ideal programme can be found in selected residential centres<sup>32</sup>, while to our knowledge there is no programme that meets all of the above criteria.

According to the Ministry of Health, 6.8% of clients have received residential or semi-residential treatment (2.7% in community, 2.9% in hospital, 1.2% in accredited private structures): residential treatment, in general, and therapeutic communities, in particular, still offer marginal treatment considering the complexity of interventions for alcohol use disorders.

The factors that limit the use of these resources are: i) cost; ii) appropriateness of therapy; iii) relationship with the network; iv) relationship with the patient. Regarding the latter, the capacity of residential programs to participate in the continuum of care is closely related to individualisation based on the characteristics of patients and their motivation. Relational methods are critical to the effectiveness of intervention and reduction of drop-outs: it is no coincidence that interventions aimed at facilitating motivation to change are considered an integral part of intervention for alcohol use disorders. Building a relationship, encouraging change and supporting self-help are essential elements of a motivational approach, and have the goal of defining objectives with the patient and the course of treatment. At present, almost all residential programs are aimed towards abstinence. However, using ‘motivational logic’, it is possible to hypothesise that customised and gradual goals can be defined in which they play a key role in strategies aimed at reduction. The objective is for the patient to have an increasingly active role in the therapeutic process, and not individuals marked by dependence, but citizens who have experienced addiction as an “accident”, who maintain their freedom of choice and the ability to assume the responsibilities of life.

## 10. The point of view of the general practitioner with a focus on addiction

A. Rossi

Alcohol is one of the key determinants of human health. The strategies that national healthcare services put in place against alcohol-related problems inevitably cross-over with one another. With a specific focus on the general practitioner, it may be most straightforward to pose a few simple questions.

- Is it useful and necessary to extend current types of health intervention to alcohol?
- Should intervention be extended to primary care settings?
- What types of intervention should be considered within a primary care setting?
- Is the general practitioner adequately trained to intervene in alcohol addiction?
- What obstacles and difficulties should be taken into consideration?

*Is it useful and necessary to extend current types of health intervention to alcohol?*

In Italy, in 2012, according to the available data there are approximately 700,000 subjects over the age of 11 years who can be considered ‘at-risk’ or affected with alcohol-related problems or pathologies, according to the definition of the WHO. In the same year, only about 69,000 subjects were in treatment at Alcoholology Centres. These numbers alone should provide an adequate answer to the question.

*Should intervention be extended to primary care settings?*

The general practitioner has the role of evaluating the patient’s lifestyle and approaches correlated with alcohol-related problems or disease, in whatever means they are presented. As for screening and evaluation of interventions for problems related to the use of alcohol (as for tobacco and drugs), any type of intervention is realistically feasible provided that there are clear objectives and limits. While in the setting of general medicine alcohol-related problems present in a heterogeneous manner, the situation is different in specialised centres where patients present at an advanced stage of dependence and/or confirmed polyabuse. Even in these circumstances, the general practitioner must play a key role. On the other hand, at a European level the importance of prevention and early detection by the general practitioner is stressed, at least for target individuals defined as “problem drinkers”, i.e. those not yet affected by addiction and who are prone to reduce their drinking when recommended by their physician.

*What types of intervention should be considered within a primary care setting?*

Unquestionably two: early detection and brief intervention. In some cases, pharmacological intervention can be provided. Concerning early detection, it is our belief that a periodic structured interview is not possible for all patients. It is thus preferable to consider specific situations, previously recognised through individual case findings or in groups of individuals at particular risk. The general practitioner must therefore resort to scrupulous recording of medical history of alcohol consumption and of any events, symptoms, or signs that would be useful to identify subjects to be assessed more carefully. In this regard, the administration of tests may be

useful, such as the shortened version of the AUDIT-C, which according to the WHO is the most reliable test in primary care settings. It should, however, be noted that an informal and open interview seems to provide sensitivity, specificity and predictive values that substantially overlap structured questionnaires<sup>33</sup>.

In subjects in whom a problem has emerged, and in those with a positive AUDIT score, brief intervention is desirable. Such intervention has shown to be significantly effective by many studies (and particularly in the setting of general medicine) in terms of reduction of alcohol consumption. Brief intervention is sustainable in terms of time and is workable in terms of educational and communicative adequacy of the general practitioner. Lastly, new methods of treatment compared to pharmacological therapy of alcoholism and the availability of easy to manage drugs, allow the general practitioner to outline interventions that are not limited to detection and management of alcohol-related diseases, but that, in selected cases, involve medical therapy.

*Is the general practitioner adequately trained to intervene in alcohol addiction?*

The answer to this question is potentially complex and protracted. For the sake of brevity, we can state the general training at medical school, the many constraints in current practice, organisational barriers and the lack of defined pathways for clinical care, make the general practitioner, in many cases, to underestimate this type of problem among his/her patients.

*What obstacles and difficulties should be taken into consideration?*

The answer to this question overlaps somewhat with the previous. The summary of the explanations given below was taken from a survey carried out by the Italian Society of General Practitioners on prior training activities. The motivations provided in this light were: i) lack of time; ii) fear of conflicts with the patient or to promote conflicts within the family or the couple; iii) perception of limited or lack of effectiveness of treatment; iv) the belief that patients with this type of problem do not show or have only poor response to treatment; v) inadequate knowledge of counselling techniques and brief intervention.

In conclusion, a simple but effective “package” of therapeutic tools, used in the setting of general medicine in collaboration with the specialist, could include: i) motivational counselling and relapse prevention; ii) pharmacotherapy, iii) referral to specialised services and self-help groups. The availability of safe and easily manageable drugs can undoubtedly favour involvement of general practitioners in diagnosis and treatment of alcohol-related problems.

## 11. Alcoholism and the network of territorial services

P.P. Pani

There are some areas that, given the complexity of the healthcare and social factors involved, are more amenable to an integrated approach in which the specialisation and fragmentation of interventions can result in damage, especially where specialists tend to focus on their obligations rather than pass on information<sup>34</sup>. Alcohol dependence is a classic example, since it is a condition for which the association of psychosocial interventions with pharmacological therapy, continuity of care, case management and integration and coordination of interventions leads to different levels of care and services, offering undisputed benefits<sup>35 36</sup>. However, there still remains the problem of integration between professionals, services and institutions. In the national context, the case of alcoholism is emblematic, where the sectorial approach affects the integration of interventions for alcohol dependence and those for dependence on other substances even when they involve the same individual. In the National Health Service, optimal integration for interventions aimed at treatment of addiction should be ensured by an orthogonal matrix system where each unit is placed in the same district (ensuring the integration of services and institutions) and in the Department (ensuring the scientific-technical quality of interventions). In this type of organisational model, services for addiction may follow a “hub and spoke” pattern, which concentrates the general functions of operational planning, coordination and clinical services in a hub. The other “nodes” and “points” are “the spokes”, whose activity is highly integrated with the hubs, are distributed throughout the territory, and are represented by structures and operational realities that can more easily fulfil requests for assistance (territorial operating units: territorial units for alcoholism, smoking, etc.; general practitioner ambulatories; mental health centres, family planning clinics, social services, etc.). Such a scheme has the aim of ensuring a uniform system and makes timely use of technical and professional skills and resources anywhere within the network, limiting transfers of clients to specific situations and time phases on the basis of the overall therapeutic and rehabilitative course. The realisation of this type of system could initially start with a pilot project, similar to those implemented abroad<sup>37</sup>, with the participation of services for addiction and other relevant healthcare and social structures.

Further interventions could be aimed at encouraging good behaviour in the achievement of defined levels of integration. In fact, current systems of payment for services do not take into account the value of integra-

tion and coordination and do not provide incentives to encourage dialogue between the different levels of care. The inclusion of continuity of care in basic levels of care could also be considered to add further economic value. The establishment of an appropriate level of assistance to ensure integration and continuity of care implies, however, the adoption of legislative and regulatory choices that resolve critical issues relating to general forms of horizontal (between institutions, services and healthcare and social operators) and vertical (between key structures, services and operators who define the functions of basic, specialist and hospital care) integration of the different areas of expertise, organisation, performance and forms of financing.

## 12. The continuum of care and economic prospects of new paradigms for therapeutic management of the alcohol dependent patient

G. Turchetti

In addition to representing a serious public health problem, alcoholism is a major expense in terms of both healthcare and social resources. In Europe, it is estimated that the social expenses related to alcohol are about € 155.8 billion, while in Italy the social costs are estimated at € 22 billion<sup>38</sup>. Undoubtedly, the magnitude of social costs, which incorporates the direct costs of healthcare, direct and indirect non-medical costs and intangible costs associated with alcoholism, must be considered when contemplating strategies that adequately address the phenomenon of alcoholism and its associated implications.

The knowledge of the importance of the overall health and economic burden caused by alcoholism is in fact the first step towards better management of the problem. Bottom-up strategies with sufficient long-term investments are needed for better preventive measures and profound cultural change. On one hand, this would help to reduce the number of individuals who become alcoholics, and on the other to help those who approach the treatment centres for alcohol addiction in a society that has certainly overcome stigmatisation of alcohol dependence. These strategies will allow increasingly better results from an economic point of view.

However, the strategies that can provide significant results in the short to medium term should be achieved through optimisation of the diagnostic-therapeutic course of the alcohol dependent patient. In fact, by changing the continuum of care towards better systematic coordination and organisation of all those involved to maximise skills and intervention strategies, health indicators can be improved and the economic burden on society due to alcoholism can be reduced.

What is, therefore, the best model for treatment of alcohol dependence? Without question, this is the model that allows for achieving abstinence, or the 'absolute best', from health, economic and social viewpoints. However, in both medicine and economics, pursuit of the absolute best is characterised by a more or less long sequence of relative bests, i.e. to achieve the best possible results within the given conditions. Thus, the question 'What is the best model for treatment of alcohol dependence?' becomes 'What is the best model to cure the individual patient in the specific phase of his disease, considering the specific clinical personal, family, and environmental conditions?' What is the realistic target given these particular constraints? In this way, the search for the absolute best is transformed into the search for the relative best. From achieving abstinence, for example, to achieving a reduction of harm. By reaching that target and stabilising the situation, the patient enters another phase of management and another target can be set, another relative best. From an economic standpoint, therefore, the search for reducing the possibility of accumulation of harm is not a renunciation (abdication, an admission of impotence) in achieving a 'first best' objective – abstinence and the total recovery of the patient – but the pursuit of an intermediate target, a relative best, on the way towards the absolute best. It must, however, be kept in mind that for some patients the relative best may be the only result to strive for in the medium to long term. While this may not be completely satisfying, from an economic point of view it is certainly preferable to reduce harm and reach an "acceptable" target rather than to fail completely in the pursuit of a more desirable 'first best' that cannot be achieved.

What is the economic impact, and social cost, of a therapeutic strategy of the alcoholic patient whose target is reduction of harm? If from a clinical point of view the availability of instruments that allow differentiation of therapeutic strategy depending on the stage of the disease and family and social conditions is undoubtedly desirable, this would permit a greater variety of targets and therapeutic strategies, even from an economic point of view, to reduce the burden of disease on society. In fact, by definition, an intermediate sub-optimal target, a relative best, is more likely to be successful compared to the ultimate optimal goal of absolute reduction of alcohol-related harm. Thus, in patients who reach this target significant savings in terms of health and social costs can be achieved. Reduction of harm is thus a desirable target, even from an economic point of view.

Greater individualisation of the target and of the relative therapeutic approaches that, in a continuum of care, brings to a series of intermediate targets, a dynamic sequence of relative bests from a clinical point of view, is the strategy which reduces further the weight of alcoholism on society even from an economic point of view.

### 13. Towards the future ... the continuum of care even in alcohol use disorders

I. Maremmani

The interest in reducing at-risk drinking, made possible by new therapeutic possibilities, may, in the near future, allow for a new therapeutic organisation for alcohol use disorder. As for other medical specialities, assistance will be organised by level of intervention. In fact, there is no scientific evidence of better results in the case of non-adoption of the general principles of treatment of chronic diseases (criterion J). Patients with alcohol use disorder should be treated as normally as possible, without resorting to the established schemes that tend to be based on rigid and stigmatising rules (criterion K).

Level 1 (the first level of intervention) is represented by the general practitioner; level 2 (the second level of intervention) includes specialised services dedicated to alcoholism, drug abuse and dual diagnoses, in addition to problem drinking in psychiatric patients (in this way it is possible to intervene in a selective manner on the different phases of alcohol use disorder, from onset to psycho-physical decompensation and even the second level of severity). A patient could, therefore, be treated at the ambulatory clinic of his general practitioner or psychiatrist's office, not outside the National Health Service, and return to their observation after specialist intervention for increasing severity. Level 3 (third level of intervention) is represented by services at University clinics that are specifically dedicated to non-responders or particularly complex cases. The general practitioner will work as an intermediary between the general population and specialised centres. Specialised services will operate as outpatient facilities and as shelter facilities through agreements with therapeutic communi-

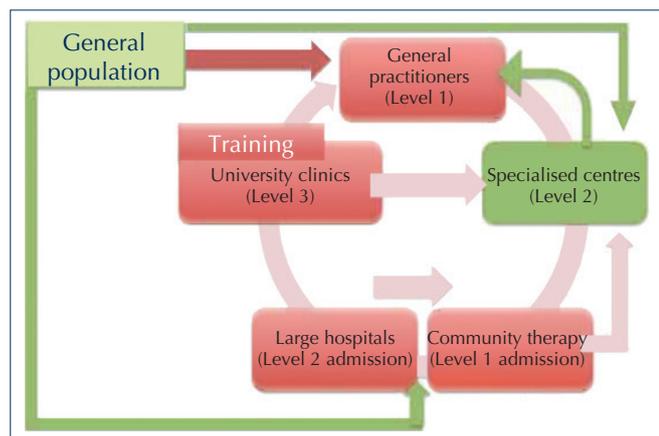
ties (first level of admission) and, in person, at hospitals (second level of admission). The University will operate in third level assistance with specific outpatient services and hospitalisation for treatment-resistant patients; knowledge will be transmitted through teaching (medical degree, nursing, psychological and sociological disciplines), specialisation, research and post-graduate teaching (level 1 and level 2 masters, CME in medicine) (Fig. 2). This model, widely used for all chronic disease, is defined as ‘shared care’ or a ‘mixed care model’. Only this model can adequately treat alcohol use disorder by minimising negative interference due to rigidity of treatments and stigma that are currently applied.

In an integrated vision of the disorder, work is needed on a cultural level to reinforce the complementary nature of psychosocial and pharmacological interventions that are not specifically dedicated to promote or maintain a state of immediate abstinence from alcohol. In addition, this is especially true in order to offset the marginalisation, more or less hidden, to which patients with alcohol use disorder, who “do not want” or “cannot at the moment” stop drinking completely, are often subjected. Integration, without any doubt, will be the cornerstone of this activity and will form the core of a new philosophy of integration between therapeutic approaches. Patients must be integrated in a civil society, within which they have become dependent and in which, in order to call them cured, must be cured, thereby creating a genuine and concrete path of recovery, from reduction of drinking at risk to complete abstinence.

Pharmacological intervention in itself, even if extremely innovative, is not able to bring about a new philosophy of treatment of addictions. Those who cure depression know which drugs bring about a faster return of the patient to employment, limit impact of the care pathway on social life and allow patients to be cured within their social context. For alcoholism, such reasoning has struggled to emerge when the drug in question allows “only” a decrease in at-risk behaviour.

At the present state of neuroscientific knowledge, it is possible to go one step further in the logic that led to the integration of psychosocial and pharmacological approaches, to remove the shadows of social judgment and to aim for a course of treatment towards absolute abstinence. In fact, when abstinence is not considered the ideal therapeutic target for a given patient because he/she is unwilling to accept it, which therefore represents a de facto barrier to treatment, new therapeutic modalities should be identified and integrated approaches that motivate patients towards a path of individualised treatment should be considered.

This allows for care of individuals who would never enter into a rigid path of care, even when they are on the verge of losing their role as father, worker, or who are mem-



**FIGURE 2.** Future prospective for treating patients with alcohol use disorder in Italy. *Prospettive future dell'assistenza ai pazienti con disturbo da uso di alcol in Italia.*

bers of families with high social standing. Accompanying these patients through reduction of alcohol intake to complete abstinence will be a historical evolution, which can only be achieved by investing in a network of comprehensive services that are integrated within healthcare and social structures.

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