THE AMSTERDAM INSTITUTE FOR
ADDICTION RESEARCH

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Specifcations for the measuring of patient characteristics in substance abuse treatment

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2003

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1   Introduction

Measurement of patient characteristics in the field of substance abuse treatment is not well developed in the Netherlands and elsewhere. On the one hand there is a great number of assessment instruments ranging from semi structural interview schedules to rating scales. On the other hand, in daily clinical practice, even when clinical relevant patient characteristics (extending those needed for administration) are measured at all, it is mostly restricted to a self-selected set of patient characteristics at intake, using a variety of self-made forms that are, although pragmatic, seldom very systematic, hardly comparable with each other and almost never psychometrically valid.

The only instrument that is applied somewhat broader in treatment settings is the Addiction Severity Index (ASI; McLellan, et al., 1980) or its European version the EuropASI (Blanken et al., 1994). However, critical analyses of the ASI or EuropASI reveal serious flaws and shortcomings. Not withstanding these, ASI, and in its slipstream EuropASI, has reached a high level of popularity and is relatively widely used, especially in the US, the Netherlands, and the Scandinavian countries.

As main reasons for the popularity of the ASI we point to: (a) its multi-dimensionality, in that it covers 7 domains not restricted to the substance use alone, (b) its one-format use for alcohol as well as drug users, and (c) its direct link to treatment planning by means of the Interviewer Severity Ratings (ISRs) which appeal especially to clinicians. Moreover, the use of an instrument with these properties will grow like a snowball because of regulations of care systems and government agencies who make the use of the ASI mandatory and because ASI is the backbone of large scale US treatment outcome monitoring systems like the Drug Evaluation Network System (DENS) and its successor the National Treatment Outcomes Monitoring System (NTOMS, to be implemented in 2003).

The designers of the ASI are well aware of the shortcomings and launched in 2002 a project to profoundly revise the instrument. Although the Dutch proposal to be committed in this renewal project was highly appreciated, a close cooperation could not be effectuated. The possibility of introducing an elaborated version of the ASI-6 in the Dutch substance abuse treatment therefore should have to wait until the American version is ready. Moreover, given the revision plans, even that will not take away a major shortcoming of the ASI, namely it's conceptual weak foundation.

In light of these criticisms, the Ontwikkelcentrum Sociale Verslavingsbeleid, responsible for the designing of care programs, and in need of adequate measuring tools for the screening and monitoring of patients in care, explored the possibilities and advisability of designing a new instrument (Broekman, Rutten, & Kersten, 2003). The report rejected the possibility to create a 'quick and dirty' tool, and advised that a more thorough analysis of the domains and functions of assessment in substance abuse treatment was warranted.

2   Functions and domains of assessment in substance abuse treatment

Firstly, we will discuss several functions that assessment can have in SAT. Secondly we will elaborate on the content of assessment, i.e. what is assessed or what are the domains of assessment?

2.1   Functions of assessment in substance abuse treatment

Assessment in the (mental) health field can serve multiple functions. We want to discriminate between the following four: Case finding, Indication making, Diagnosing, and Evaluation[*].

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[*] Because we confine ourselves to assessment within the substance abuse treatment system, we will not elaborate on the

1. **Case finding** refers to the identification of problems or diseases in persons other then the primarily presented problem that also needs care or further assessment. It requires a short instrument that is able to quickly detect significant levels of problems without probing too deep, has a wide coverage, and great sensibility (easy communicable, understandable, transparent).

2. **Indication making** refers to the assigning to a specific form of treatment (differing in intensity and/or in modality). This function can be called triage, treatment planning or patient placement and requires short instruments (not probing too deep) that are able to sort patients out over a limited number of treatment levels and/or modalities, and have a relatively great sensibility.

3. **Diagnosing** refers to the identification of the type and the severity of illness or (co) morbidity of the patient, like dependency, COPD, HIV, hepatitis, depression, schizophrenia etc. Diagnostics should be theory based and are used to find the right treatment and course of action for a specific patient. When people are admitted to a specific treatment modality (for instance inpatient or outpatient), psychiatric and somatic comorbidity can be assessed in a structured and standardized way. At this stage there is more time and resources available and one has the option to use specialized staff (e.g. psychologist, medical doctors, psychiatrists). A diagnostic instrument should have a high precision and validity.

4. **Evaluation** refers to the assessment during the course of the treatment to monitor whether desired and planned changes are taking places and patient's condition on a specific area improves without deterioration the situation on other areas of life. Here we need an instrument that is able to monitor the patient's condition validly with precision thereby being sensitive to change.

Recently, a number of reviews have been written on the subject of assessment and assessment instruments in a special series of *Behavior Research and Therapy* (Sobell & Sobell, 2002). (Carey, 2002) distinguishes: (a) Screening/identification, (b) Treatment planning, (c) Motivational feedback, and (d) Monitoring change. (Carroll & Rounsaville, 2002), distinguishes between (a) Evaluation and diagnosis of drug use disorders, (b) Identifying concurrent disorders and problems, (c) Treatment planning, and (d) Evaluating outcome.

2.2   Domains

What domains are or should be covered by assessment in substance abuse treatment? To give an impression of actual domains used, we have compiled two tables giving an overview of domains covered by a selection of assessment instruments or placement systems (Table 1). In this table we present the ASI as the first multi-dimensional instrument. In the second column, we tabulate the domains of the Maudsley Addiction Profile (MAP), which is also an omnibus instrument (i.e. with broad coverage) that has been developed in the UK as an alternative to the ASI especially to minimize "the administrative burden on treatment personnel there are important benefits from developing a brief, core instrument for outcome research." (p. 1858). Thirdly we choose to tabulate the domains of the recently in Germany developed Psychosocial Resources oriented Diagnostic system (PREDI), because it is good illustration of a relatively new development in the field of substance abuse treatment in that it focuses on patient functioning as complementary to patient diseases, and especially to motivation to change and personal resources. Patient Placement Criteria for the Treatment of Substance-Related Disorders, Second Edition-Revised (PPC-2R) is not an instrument but a quite extensive clinical guide developed by the American Society of Addiction Medicine (ASAM) to be used to allocate patients to appropriate levels of care. Because the perspective of PPC-2R is on the matching of patient (characteristics) and treatment (levels of care) from a clinical perspective it can be assumed that the domains that are used in the PPC-2R are of immanent

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function of screening, because in essence this function refers to "early diagnosis" in a general population.

importance when studying assessment in substance abuse treatment. However, one has to keep in mind that it is a clinical guide and not an instrument. In the last column, therefore we present the domains of the Client Matching Protocol which both (a) an instrument and (b) an explicit decision tree allocating patient to long-term TC(Therapeutic Community)-oriented outpatient or inpatient treatment..

Table 1 Domains covered by 5 selected assessment instruments/systems

ASI (McLellan et al., 1992)	MAP (Marsden et al., 1998)	PREDI (Küfner, Vogt, & Indlekofer, 2000)	PPC2-R (2001)	CMP (Melnick, De Leon, Thomas, & Kressel, 2001)
			Acute intoxication and/or withdrawal	
Alcohol	Substances use	Physical Situation • Health status • Health behavior • Consume of psychotropic substances		Pattern of use (30 days)
Drug				Abstinence history
	Health risk behavior			
Medical	Health symptoms • Physical health • Psychological Health		Potential biomedical conditions and complications	
Psychiatric		Psychological Situation • Self-esteem • Self-realization • Self-control • Reality relation	Emotional, behavioral or cognitive conditions and complications	
		Every Day Situation		
Family/Social	Personal/Social functioning • Relationships • Employment • Illegal activities	Relationship Situation • Partner • Family / Living Community • Social Network	Recovery/living environment	Social factors
		Living Situation		
Employment/ Support		Employment Situation		Habilitation (education and work)
		Financial Situation		
		Sociocultural situation		
Legal		Legal Situation		
			Readiness to change	
			Relapse, continued use or continued problem potential	Exclusion criteria (preventing admission: practical, medical)

Each instrument or system's structure imposes an order on the domains. However, to make easier to compare the different instruments on their domains, we have reordered the domains so that the rows in the table more or less represent similar domains.

Depending on one's view, one could say that the 5 instruments all focus more or less on the same domains, or one could be surprised how it is possible that such an diverse picture of terms and domains can emerge from a tabulation of instruments meant to gave broad coverage on substance use disorders.

Illustration of Domains & functions by the domain "Social"

The two patient placement models in Table 1, the PPC-2R and the CMP, both cover a domain which we will call

Social. For the CMP it is: Social factors (if 1/3 of the following items indicates high risk (non drug-free domicile; peer involvement with drugs; criminal behavior) then social factors is scored as Negative, otherwise it would be scored as Positive)

For the PPC-2R: 6 it is Recovery/Living Environment. The ASAM circumscribes the domain Recovery/Living Environment as: "Assessment considerations include: Do any family members, significant others, living situations, or school or work situations pose a threat to the patient's safety or engagement in treatment? Does the patient have supportive friendships, financial resources, or educational or vocational resources that can increase the likelihood of successful treatment? Are there legal, vocational, social service agency or criminal justice mandates that may enhance the patient's motivation for engagement in treatment? Are there transportation, child care, housing or employment issues that need to be clarified and addressed?" (p. 7).

One can readily see that Social Factors in CMP is far more strictly defined by the three items listed in that domain as is the case in PPC-2R Recovery/Living Environment. Both however are meant to point at risk factors in social environment and relationships.

It is easy to construct a kind of scale by rephrasing the considerations as items with response categories yes/no or from 0 (none) via 2 (in between) to 4 (very much) or something like that. A more succinct approach (as does the ASAM in an experimental appendix where they present a risk matrix) is possible by defining scores on dimension 6 (Recovery/Living Environment) from 0 (The patient has a supportive environment or is able to cope with poor supports) via 1,2,3,4a to finally 4b (The patient's environment is not supportive and is actively hostile to addiction recovery, posing an immediate threat to the patient's safety and wellbeing).

Both "social" domains of CMP and PPC-2R refer to a same kind of construct, although they differ in the way the construct is operationalized.

One of the ASI domains is family/social. Although because of the same label "social", one could think this would contain the same kind of content., it does in fact cover a very different domain. The critical objective items for this domain on which the ISR Interviewer Severity Rating should be based are: F2-3 Stability/Satisfaction – Marital; F5-6 Stability/Satisfaction – Living; F10 Satisfaction with Free Time; F30-31 Serious Conflicts; F18-26 Lifetime Problems with Relatives.

In fact there are two items on substance use in this section: Do you live with anyone who: F7. Has a current alcohol problem? F8. Uses non-prescribed drugs? However these items do not contribute to a score on the domain (neither the ISR nor the CS (Composite Scores)). The ASI domain is also meant to measure a prognostic or a predictive factor but to rate the need for family and social counseling.

The assumption behind the relevance of the social factors as a risk is that when they pose a risk it would be necessary to place the patient in a "protective" treatment setting. For triage purposes one could construct a simple index called "Social Environmental risk" SER by making two items like "Does the social environment reinforces the substance use of the patient?" and "Does the patient have a social environment that will support the treatment". The point being here is that one or two key-questions will be enough to get an estimate of the relevant factor when only triage is needed. In diagnosis and treatment monitoring the reinforcing or supporting aspects and people can be more extensive and in detail assessed and become target of the treatment.

3   A common language: the WHO family of classifications

What should be established is a description of the domains relevant for addiction. These domains fall apart in two broad categories: (a) addiction as a disease entity, and (b) health related personal functioning especially related to addiction.

To overcome the theoretical shortcomings of existing assessment instruments in addiction, we think it would be wise to adopt the perspective of human functioning. The WHO-ICF (before: ICIDH and ICIDH-2) facilitates greatly

such an orientation. In WHO's international classifications, health conditions (diseases, disorders, injuries, etc.) are classified primarily in ICD, which provides an etiological framework. Functioning and disability associated with health conditions are classified in the ICF. ICD and ICF are therefore complementary. ICD provides a "diagnosis" of diseases, disorders or other health conditions, and this information is enriched by the additional information given by ICF on functioning. ICF encompasses all aspects of human health and some health-relevant components of well-being and systematically groups them in terms of health domains and health-related domains. The ICIDH, precursor of the ICF, has been used as a research tool - to measure outcomes, quality of life or environmental factors; as a clinical tool - in needs assessment, matching treatments with specific conditions, vocational assessment, rehabilitation and outcome evaluation; as a social policy tool - in social security planning, compensation systems and policy design and implementation; and as an educational tool - in curriculum design and to raise awareness and undertake social action.

3.1   A short introduction to ICF

ICF provides a description of situations with regard to human functioning and its restrictions and serves as a framework to organize this information. It structures the information in a meaningful, interrelated and easily accessible way. ICF organizes information in two parts. Part 1 deals with Functioning and Disability, while Part 2 covers Contextual Factors.

Part 1 (Functioning and Disability) has two components. The **Body** component comprises two classifications, one for *functions* of body systems (b), and one for body *structures* (s). The chapters in both classifications are organized according to the body systems.

The **Activities and Participation** component covers the complete range of domains denoting aspects of functioning from both an individual and a societal perspective.

Part 2 (Contextual Factors) has two components:

A list of **Environmental Factors** is the first component of Contextual Factors. Environmental factors have an impact on all components of functioning and disability and are organized in sequence from the individual's most immediate environment to the general environment.

Personal Factors is also a component of Contextual Factors but they are not classified in ICF because of the large social and cultural variance associated with them.

Table 2 ICF: Components and chapters

Part	Component	Classification	Chapter
Part 1 Functioning & Disability	Body	Functions (b)	1 Mental functions
			2 Sensory functions and pain
			3 Voice and speech functions
			4 Functions of the cardiovascular, haematological, immunological and respiratory systems
			5 Functions of the digestive, metabolic and endocrine systems
			6 Genitourinary and reproductive functions
			7 Neuromusculoskeletal and movement-related functions
			8 Functions of the skin and related structures
		Structures (s)	1 Structures of the nervous system
			2 The eye, ear and related structures
			3 Structures involved in voice and speech
			4 Structures of the cardiovascular, immunological and respiratory systems
			5 Structures related to the digestive, metabolic and endocrine systems
			6 Structures related to the genitourinary and reproductive system
			7 Structures related to movement
			8 Skin and related structures
	Activities and participation (d)		1 Learning and applying knowledge
			2 General tasks and demands
			3 Communication
			4 Mobility
			5 Self-care
			6 Domestic life
			7 Interpersonal interactions and relationships
			8 Major life areas
			9 Community, social and civic life
Part 2 Contextual Factors	Environmental factors (e)		1 Products and technology
			2 Natural environment and human-made changes to environment
			3 Support and relationships
			4 Attitudes
			5 Services, systems and policies
	Personal factors		Not classified

3.2 Advantages of the use of ICF

- ICF provides a common language to which existing measurement instruments can be linked. "it will probably become the cardinal reference for existing health-status measures, as well as for health-status measures to be developed in the future" (Cieza et al., 2002).

- Use of ICF facilitates communication of assessments and outcomes in universally (also by lay people) understandable terms.

- Because ICF is an exhaustive framework of human functioning, it can point to areas that are either ignored or not well developed and that need further development..

- Functional status is often a better indicator of treatment needs and outcomes than a diagnosis alone.

- By using a general framework that is used in health and health care, addiction treatment services join the regular health care services thereby in the long run facilitating integration into regular health services.

3.3 An exemplary linkage of patient characteristics to the ICF

To give an impression of the way relevant characteristics of patients can be linked to ICF, we give the following table. It is an informal analysis of work done in the OSVI project. ICF uses an alphanumeric system in which the letters b, s, d and e are used to denote Body Functions, Body Structures, Activities and Participation, and Environmental Factors. These letters are followed by a numeric code that starts with the chapter number (one digit), followed by the second level (two digits), and the third and fourth levels (one digit each).

Table 3 Linking of OSVI patient characteristics to ICF Part1 (Body & activities)

Component / calssification	Chapter	Code	Function / Activity or Participation	Patient characteristic as mentioned in the OSVI project
Body functions (b)	1 Mental Functions	b1		
		b1266	Confidence	Eigenwaarde; Zelfbeeld
		b1301	Motivation	Motivatie
		b140	Attention functions	Aandacht concentratie
Body structures (s)				
Activities & participation (d)	1 Learning And Applying Knowledge	d1		Algemene ontwikkeling
		d175	Solving problems	Probleemoplossend vermogen
	2 General Tasks And Demands	d2		
		d210	Undertaking a single task	Vaardigheden basale
		d230	Carrying out daily routine	Dagbesteding
		d2301	Managing daily routine	Dag- en nachtritme; Dagritme + regelmaat; Dagstructuur; Regelmaat; Structuur in het dagelijks leven
		d240	Handling stress and other psychological demands	Conflicthantering
	3 Communication	d3		
	4 Mobility	d4		
	5 Self-Care	d5		ADL; Zelfverzorging
		d5201	Caring for teeth	Gebitssanering
		d570	Looking after one's health	Gezondheid
		d5702	Maintaining one's health	Hulpverlening; Medicatie; Veilig gebruik; Veilig vrijen
		d598	Self-care, other specified	Automutilatie
	6 Domestic Life	d6		Wonen; Zelfstandig functioneren; Zelfstandigheid
		d610	Acquiring a place to live	Dakloos; Huisvesting
		d640	Doing housework	Huishoudelijke vaardigheden
	7 Interpersonal Interactions and Relationships	d7		
		d710	Basic interpersonal interactions	Aanspreekbaar op gedrag; Groepsgedrag; Praten over persoonlijke zaken + [leren]; Sociale vaardigheden
		d720	Complex interpersonal interactions	Aangepast gedrag; Contact + onderhouden en verdiepen [leren]; Contact onderling + [bevorderen]; Huisregels
		d7202	Regulating behaviours within interactions	Agressief gedrag

Component / calssification	Chapter	Code	Function / Activity or Participation	Patient characteristic as mentioned in the OSVI project
		d740	Formal relationships	Afspraken nakomen; Instanties contacten
		d760	Family relationships	Familie; Sociaal netwerk
	8 Major Life Areas	d8		
		d825	Vocational training	Opleiding
		d839	Education, other specified and unspecified	Educatie op cultureel gebied en ontspanning + samen naar musea gaan etc.
		d840	Apprenticeship (work preparation)	Arbeid; Arbeid en scholing; Werk
		d845	Acquiring, keeping and terminating a job	Arbeid
		d8451	Maintaining a job	Op tijd komen
		d860	Basic economic transactions	Budgetteren; Financiën; Schuldensanering
	9 Community, Social And Civic Life	d9		
		d910	Community life	Maatschappelijke participatie
		d920	Recreation and leisure	Vrijetijdsbesteding
Environmental factors (e)	3 Support and relationships	e3		Sociaal netwerk
Personal factors				Leeftijd, sexe, woonsituatie, opleidingsniveau, bron van inkomsten

Only a few characteristics were mentioned that are linked to the Body component. These were linked to functions within the Body component and within the function classification to Chapter 1: Mental functions. This certainly is a consequence of the restriction of the OSVI research to and concentration on that part of substance abuse services that concentrates on harm reduction and general functioning of patients. So most of the relevant characteristics, at least as mentioned by the professionals, are in the Activities & Participation part pf the ICF. As further can be seen, within the Activities & Participation part, no characteristics were linked to the chapters 3 Communication (general and specific features of communicating by language, signs and symbols, including receiving and producing messages, carrying on conversations, and using communication devices and techniques), 4 Mobility (moving by changing body position or location or by transferring from one place to another, by carrying, moving or manipulating objects, by walking, running or climbing, and by using various forms of transportation.)

3.4   Current developments in using and implementing ICF

3.4.1   WHO-DAS II

ICF itself is not an instrument but a conceptual frame and a language. However a generic instrument (the WHODAS II) that covers the activities and participation component is available. During development, the WHODAS II was linked to the conceptual model of the ICIDH-2 and ICF, and its 6 domains are directly mapped to the ICF: (Understanding and communicating with the world (cognition); Moving and getting around (mobility); Self care (attending to one's hygiene, dressing, eating and staying alone); Getting along with people (interpersonal interactions); Life activities (domestic responsibilities, leisure, and work); Participation in society (joining in community activities)).

Table 4 WHODAS II versions

Administration	Number of items		
Interviewer administered	12	12+24 (screener)	36
Self administered	12		36
Proxy (clinician or relative)	6		36

3.4.2 Generic core-set and condition-specific core sets

To tailor the content of the domains to specific diseases, studies have been undertaken and are underway in which links between specific conditions or diseases to salient ICF domains of functioning are being made. As (Stucki et al., 2002) point out "Such generally agreed on lists of ICF domains can serve as condition-specific core-sets to be rated for every patient with the specific condition. Thus, condition-specific core-sets can be defined as a selection of ICF domains that includes the least number of domains possible to be practical, but as many as required to be sufficiently comprehensive to cover the prototypical spectrum of limitations in functioning and health encountered in a specific condition. To allow for comparisons of health across conditions, a generic coreset with domains representing the most relevant domains could be developed, including the least number of domains possible to be practical, but as many as required to be sufficiently comprehensive to cover the general spectrum or limitations in functioning and health that is encountered in most conditions." (p.281). Some of the diseases the group of Stucki is working on, are rheumatoid arthritis, diabetes mellitus, and depression. Their group will not cover addiction, but especially from the point of view of a growing recognition of addiction as a chronic illness, it seems obvious to follow this direction and try to link the functioning of people with addiction to ICF.

3.4.3 APA Clinical Manual

The American Psychological Society is producing a standard guide for the application of the ICF. The manual will provide allied health professionals with the necessary tools for reliable, valid and clinically useful classification. In April 2003 4 prototype chapters have been written along with the introduction. These materials will be produced as an abbreviated manual (by June) for field testing. APA tries to field test in a number of countries in which English is a primary language.

In June 2003 the NACC (North American Collaborating Centre WHO) organizes an big ICF conference where two lectures from APA on recent developments with the manual are scheduled.

3.4.4 Independent, comprehensive and objective indication making in the Netherlands

ICF is also one of the pillars of the newly introduced indication process for the first compartment of Dutch health care, which roughly spoken could be characterized as the care part whereas the second compartment could be characterized as the cure part of the health care system. Regional agencies organized at local authority level (so called RIOs) are responsible for the independent determination of indication that is required in order to be able to claim care in the first compartment. Based on assessment of current functioning guided by ICF, it is decided what kind of and what amount of help the person is entitled to get. In the second compartment the counterpart of ICF in WHO family of classifications, the ICD plays a crucial role, not directly in determining need but by linking diagnosis to fixed costs. Especially interesting is that for instance the Association for Rehabilitation Medicine in the Netherlands has argued that costs cannot not only be based on diagnosis (ICD) but should also be based on functioning (ICF), thereby stressing the importance of functional status as an important determinant of treatment need (and costs).

4 Evaluating a domain: Constructing a measure

Concepts: Need assessment, severity, clinical significance, cut-off point

For making decisions about treatment or support directed at the domain, the score on a domain has to be evaluated. The score on a domain could be a measure of severity of a health condition or disease (as in the HDRS Hamilton Depression Rating Scale which measures severity of depression) or it could reflect a need that should be met (as in assessing the education and skills, or even housing). The simplest way to do this is by specification of a cut-off point for the score. So a score of x on domain A means domain A should be the focus of treatment or care or assistance or whatever.

4.1 Diagnosis and severity

Although all criteria of a formal ICD or DSM diagnosis can be met, this does not imply that the diagnosed problem is of clinical significance. Clinical significance is often indirectly assessed with reference to consequences like impairment. (Feinstein, 1987) makes a distinction between an intrinsic or proximal description of a phenomenon and an extrinsic description. An intrinsic description is a direct description of the phenomenon, while the extrinsic evidence refers to the consequences. "Extrinsic evidence can have at least three different levels of separation from the proximal phenomenon. At the *first* level, the evidence reflects an immediate although indirect consequence of the phenomenon. Thus, because direct cardiac evidence is seldom observed clinically, congestive heart failure is usually described with extrinsic clinical evidence, manifested by the immediate consequences in the lungs, liver, extremities, neck veins, or other sites elsewhere in the body outside the heart. At the *second* level of extrinsic separation, the evidence reflects a patient's subjective response or reaction to the first-level consequences. Such evidence is provided by information about the impact of the congestive failure in the patient's functional capacity in various activities of daily life. At the *third* level of separation, the extrinsic evidence reflects the way that someone responds or reacts to the phenomena observed in the patient. Thus, the severity of congestive heart failure might be described according to a clinician's actions in prescribing treatments or arranging hospitalization" (Feinstein, 1987).

(Narrow, Rae, Robins, & Regier, 2002) discussing the clinical significance of symptoms, describe the questions used in DIS (Diagnostic Interview Schedule) and UM-CIDI (University of Michigan version of the Composite International Diagnostic Interview) to assess clinical significance as "interference with daily life", "mention it to a professional, or "taking medication", thus correlating clinical significance with severity or prominence of symptoms and resulting distress reflected in impairment of functioning , seeking help, and treatment. These are 2nd and 3th levels of extrinsic evidence, and especially used as criteria for clinical significance.

According to ICD-10 and DSM-IV a diagnosis of dependence or abuse is made when a number of criteria are met. In contrast to other DSM-IV diagnoses, the diagnosis of dependence or abuse does not have a

> **DSM-IV criteria and scalability (severity)**
>
> *Substance Abuse*
>
> 1. Recurrent failure to meet **important responsibilities** due to use?
> 2. Recurrent use in situations when this is likely to be **physically dangerous**?
> 3. Recurrent **legal problems** arising from use
> 4. **Continued to use despite recurrent problems** aggravated by the substance use:
>
> *Substance Dependence*
>
> 1. **tolerance** (needing more to become intoxicated or discovering less effect with same amount
> 2. **withdrawal** (characteristic withdrawal associated with type of drug)
> 3. Using more or for longer periods than **intended**?
> 4. **Desire** to or unsuccessful efforts to cut down?
> 5. Considerable **time spent** in **obtaining** the substance or using, or **recovering** from its effects?
> 6. Important social, work, or recreational **activities given up** because of use?
> 7. **Continued use despite knowledge** of problems caused by or aggravated by use.

qualifier of severity. Attempts have been made to scale the diagnostic criteria using one-parameter IRT models, which would yield a scale of which one could say it measures severity of dependence. (Kan, Breteler, van der Ven, & Zitman, 1998) constructed a scale for benzodiazepine dependence for DSM-III-R and ICD–10 criteria. If these criteria are indeed scalable, criteria or counting, i.e. how many criteria of DSM or ICD have been met, would provide an excellent and sufficient measure of dependence (or addiction) severity. This was actually proposed (Task Force on DSM-IV, 1991) but later rejected due to inconsistent results in DSM-IV field trials (Miele et al., 2000). (Rounsaville, 2002) states that the dependence syndrome as a construct implies (a) the unidimensionality of the syndrome (b) the relatively independence of the syndrome from other areas of health and functioning (especially also the consequences[*]) and (c) the syndrome is a continuous phenomenon, not categorical. If this were true, then severity of dependence would be a valid construct.

(Cornel, Knibbe, Van Zutphen, & Drop, 1994) constructed a one-parameter IRT scale for the severity a problem drinking, consisting of 18 items (starting with 28 items from CAGE(Mayfield, McLeod, & Hall, 1974), SMAST(Selzer, Vinokur, & van Rooijen, 1975), shortened SAAST(Davis, Jr., Hurt, Morse, & O'Brien, 1987) and some additional items). Although developed as a case finding instrument for general practioners, because of its 1-parameter IRT property, the scale can perfectly well be use to measure severity of problem drinking. The only problem in this respect could be that the scale may be too restricted in range for (very) severe problem drinking. Most "easy" item is "Have you ever felt the need to cut down your drinking", most "difficult" item is "Have you ever lost a job because of your drinking?". There are no items on the actual amount or frequency of drinking.

(Miele et al., 2000) developed the Substance Dependence Severity Scale (SDSS), a clinician-administered semi-structured interview designed to assess the severity and frequency of DSM-IV dependence symptoms for a range of substances. It assesses dependence severity for several substances alcohol, cocaine, heroin, stimulants, licit opiates, sedatives, methadone, cannabis, and hallucinogens. Two 'other' drug categories cover the use of drugs such as inhalants, as well as DSM-IV dependence diagnosis though with a modified 30-days time frame instead of the DSM-IV 12 months. It asks in details all of the symptoms, and yields number of days symptom occurred at any level (days, in fact not actual days but in frequency ranges from" 0 =none; 1=1-5; 2=6-10 and so on to 7=30 days), usual symptom severity (severity), worst symptom severity (worst), and number of days symptom occurring at worst severity level (worst days). For each of the items the authors provide descriptions of anchor points on a 0 – 5 severity scale. So for instance for the item "Important social. occupational/academic, or recreational activities reduced or given up as a result of substance use" the key severity elements are: (1) the number of areas in which activity was reduced due to substance use and (2) the extent activity was reduced. So for instance Mild severity (coded as 2) is described as: Reduced activities in 1 or 2 areas, but still functions in others, and Extreme severity (coded as 6), is labeled as: "Discontinued virtually all non-substance-related activities".

So, although DSM-IV does not provide a severity qualifier for dependence, we can conclude that is quite well possible to measure severity of dependence as a valid construct. This is important because it means we can measure it as "close" as possible without referring too much to third level extrinsic proximies, like previous treatments, social problems.

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[*] ICD-10 as world standard is less cultural biased and therefore stresses less the social and legal embedding and consequnxes of dependence, whereas DSM-IV is primarily for the US market. As (Rounsaville, 2002) states: "In the USA, pathological substance use most typically comes to medical attention as a result of social or legal consequences. Particularly in teen and young adult samples, many treatment-seeking patients do not manifest 3 or more dependence symptoms and present with social but not physical consequences of substance use. Elimination of social or legal consequences from the diagnostic criteria would prevent treatment providers from documenting a substance-related diagnosis as the target of their treatment." (p. 84).

4.2 Coverage, range, and precision of a measure

Some important properties of a measuring instrument have visualized in Figure 1. Coverage is the number of dimensions an instrument measures. The coverage from the ASI is for instance much broader than the coverage of the MAP, because the ASI reveals scores for seven dimensions whereas the MPA only revelas scale scores for three dimensions. Within a dimension it is important what the range of the dimension is, meaning what is the lowest and what is the highest level than can be measured? An instrument meant to use to screen in a general population for alcohol dependence will need another range of measurement than an instrument that is meant to be used as measure for the severity of dependence for a residential clinical population. The range of the "screener" will be at the lower end on the dimension and can be quite small, as long as it includes the cut-off point. Within this small range that is of relevance, precision could be enhanced (by adding items) and a more reliable measurement can be made around the cut-off point. An instrument designed as an routinely used evaluation and monitoring status measure, should have a large range and will in general not be very precise. However if small effects are judged to be of importance, an instrument with more precision should be designed.

| Range: | 10:0-10 | 2:2-4 | 2:2-4 | 2:7-9 | 10:0-10 |
| Precison: | 10 | 10 | 1 | 20 | 10;5-7/1;re |
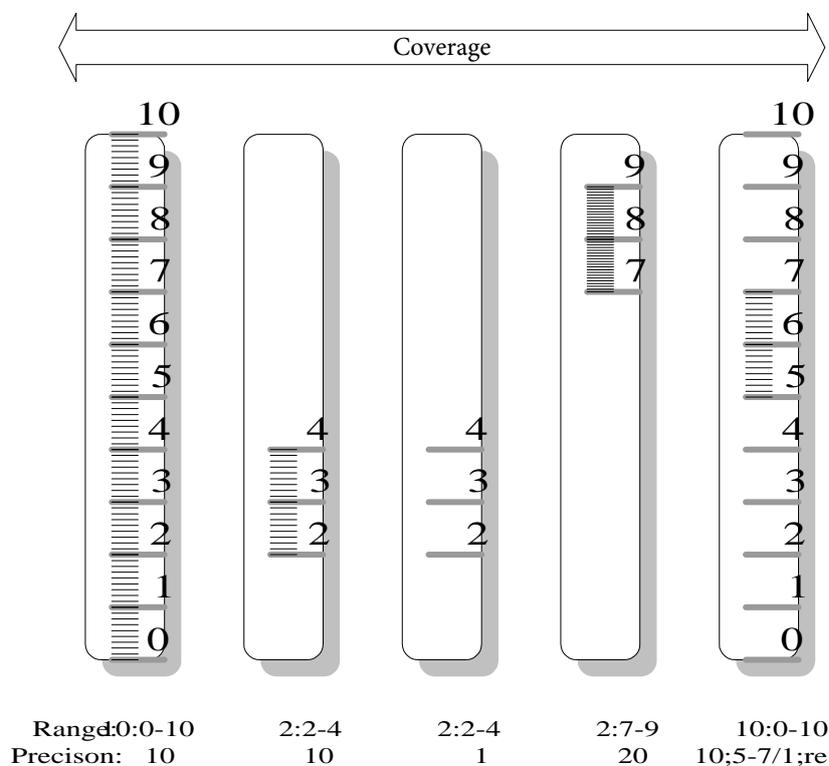
Figure 1 Coverage, range, and precision of a measure

5 Current practices in the Dutch Substance Abuse Treatment Services

10 out of the 17 substance abuse treatment centres we wanted a response from, have now responded to a survey into their current practices regarding the use of standardized assessment instruments. Three centres did not want to cooperate, and from four centres we still expect a response. Without making a formal analysis and sill waiting for these responses, a clear picture emerges.

A majority of the responding centres use the EuropASI or are implementing the use of it and intend to use it standard for all new clients. One centre is experimenting with the OSVI as an alternative for the EuropASI. One centre also uses the EuroQol as augment to the EuropASI.

In addition some centres have developed their own instruments especially for evaluation and client satisfaction.

As instruments that are used for more extensive assessment, or diagnosis the SCL-90 is often used. One centre also mentions the HDRS (Hamilton). Personality inventories that are used are the NVM, MMPI-2, NPV, PDQ-4, and VKP/IPDE. One centre mentions the use of the SIDP-IV as diagnostic tool. For incidental assessment of coping behavior we see the use of the UCL. For incidental assessment of assertive behavior we see the use of the IOA or SIG. One centre uses the ICL to assess interpersonal behavior.

For neuropsychological assessment, the WAIS, the WMS-R, the TMT, Bourdon Wiersma, and the MMSE are mentioned.

The use of all the instruments in the preceding paragraph is limited and mainly in residential settings or in special treatment groups.

Most striking in executing this survey were the problems we encountered and the time it took to get contact persons in the centres and the problems these contact persons encountered within their centres to get the information we needed. We interpret this as sign of a lack of expertise and policies in the centres on the issue of assessment.

Another conclusion is that there is no, except of course the EuropASI, instrument used in the centres that is designed for substance abuse.

6 Discussion

- Instruments will differ in precision, coverage, sensibility, but they have to refer to the same concepts, that should be clearly defined.
- ICD/ICF provides a language for these concepts.
- It is desirable to specify a set domains that should be assessed in all cases.
- For this core set of domains, the "best practice" measurement instrument in the discipline most involved in the domain (eg medical: doctors; psychiatric: psychiatrists) instead of developing for each domain items specific items for addiction.
- If there is a convincing need for specific addiction items, should be added to the "regular" items on the domain

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Appendix A The case of the ASI and the EuropASi

A.1   Conceptual muddle: domain scores

The seven domains of ASI are in different ways transformed into indices or ratings for the domain as a whole.

A.1.1   Ratings: ISR Severity Ratings

First off all there are what are called the "Severity Ratings". This is, superficially seen, an easy item at the end of each domain under the heading "Interviewer Severity Rating" and is worded as:

- How would you rate the patient's need for medical treatment?
- How would you rate the patient's need for employment counseling?
- How would you rate the patient's need for treatment for alcohol problems?
- How would you rate the patient's need for treatment for drug problems?
- How would you rate the patient's need for legal services or counseling?
- How would you rate the patient's need for family and/or social counseling?
- How would you rate the patient's need for psychiatric/psychological treatment?

Instructions for the interviewer how to rate these items on a scale from 0-9 are very complex. First of all a global description is given of the scale:

"0-1 No real problem, treatment not indicated,

2-3 Slight problem, treatment probably not necessary,

4-5 Moderate problem, some treatment indicated,

6-7 Considerable problem, treatment necessary,

 8-9 Extreme problem, treatment absolutely necessary."

The interviewer has to take two steps to make an appropriate rating:

"STEP 1: Derive a range of scores (2 or 3 points) which best describes the patient's need for treatment at the present time based on the "objective" data alone.

1. Develop a picture of the patient's condition based on the "objective" items and the critical items (Appendix I).
2. Formulate an approximate range.

STEP 2: Select a point within the range above, using only the subjective data in that section.

1. If the patient considers the problem to be considerable and feels treatment is important, select the higher point within the range.
2. If the patient considers the problem to be less serious and considers the need for treatment less important, select the middle or lower rating."

What   "objective items" are can be found in the manual, but there seem to be quit some inconsistency in it. The intention is that they are items referring to objective data. However, for instance in the alcohol section, the manual states that the items 1-22 are the "objective" items, thereby for instance excluding items 26 and 27 (number of days experiencing alcohol (26) drugs (27) problems). Furthermore, the interviewer should pay "particular attention to those critical items (see Appendix I) in each problem area which our experience has shown to be most relevant to a valid estimate of severity." Also these critical items are not marked on the form but only listed in the manual. For the Alcohol section these are 1 - 13 Abuse History 15 - 16 Abstinence 17 ODs and DTs 18 Lifetime Treatment. So the interviewer has mentally to formulate a range of scores (2 or 3 points) based on the objective and especially on the critical items. The lower or upper part of the range is then chosen as the score of the ISR

depending on the score of the patient on the two patient questions in each domain about how he (a) feels how serious the problems are, and (b) how important he thinks treatment or counseling is.

This instruction of how to accomplish an ISR makes clear, that this is a task that cannot be accomplished by a "normal" human in normal routine practice. The instruction suggest it is an objective rating primarily driven by objective data, and then weighted by those objective data that are, in the experience of the authors, the most critical items, and a bit adjusted to patients perspective, whereas in fact it is not made clear how to actually weigh and evaluate the items to come up with the rating.

Even more confusing is the general meaning of the rating. Firstly, the rating equals *severity* to *need of treatment*. Much of the confusion surrounding the ASI is especially centered on the concept of Severity. Actually ASI does not measure severity at all and certainly not addiction severity, but tries to estimate the need from treatment and counseling. Illustrative for this misconception is a what will be a slip of the pen in (Alterman, Brown, Zaballero, & McKay, 1994) as they state: "As noted, in making severity ratings, the interviewer is first advised to make an initial estimate of the *severity of need for treatment* [italics added] on the basis of …." Secondly, the manual states explicitly that what should be rated is the need of **additional** treatment. Although this makes sense when the ASI is use in triage, it invalidates the rating as a rating of severity. If all help needed is provided, no additional treatment is necessary and so the ISR should be 0.

Reliability of the ISR's have been proven low and are even by the makers not considered to be essential "Even for those with primary clinical uses, these ratings are not essential and are perhaps the most vulnerable of all the ASI items to the influences of poor interviewing skills, patient misrepresentation or lack of comprehension and even the surroundings under which the interview is conducted. Therefore, it is entirely acceptable to train ASI interviewers and to use the ASI without referral to the severity ratings." (Treatment Research Institute, 1990)

A.1.2   Computed indices

A.1.2.1   CS Composite scores

The Composite Scores are the original and therefore the first in a series of attempts to make computed summary indices for the ASI domains. They were constructed because the ASI research group needed scores on the domains that were able to show change in patient status. That implied that items about patient's background could not be part of the CS, that should consist only of items regarding current status and able to change in time. How the CS have been developed remains unclear as the Composite Score Manual (McGahan, Parente, Park, & McLellan, 1985) states: "…we developed an empirical method of combining those items from each problem area which were capable of showing change and which were well related to each other …. This method entailed the intercorrelation of the potential items within each problem area to remove those which were not well related and then testing their internal consistency or reliability." The items have been weighted in order to achieve a sort of arithmetically standardized contribution of an item to the CS. (for instance the Medical domain, M6: how many days have you experienced medical problems in the last 30? (range 0-30) is divided by 30 to get a range of 0-1, and the questions on patients M7 problem and M8 need of treatment perception (range 0-4) are divided by 4 to get a range of 0-1 and the sum of these 3 items (range (0-3) is divided by 3 to get the CS range: 0-1. Table 5 shows the number of items of the CS. All of the CS except Employment/support contain the two patient evaluation items: Are you troubled or bothered by *domain,* and how important to you is treatment for this *domain.*

Table 5 ASI Composite Score, internal consistency computed on the July2001DENS_Web.sav (N ± 20,000) Data set

Domain	n items	Inclusion of 2 patients evaluation items	alpha	alpha without 2	r between 2 patients evaluation items
Medical	3	Y	.9180	_	.894
Employment/support	4	N	.7155	_	.848
Alcohol	6	Y	.9212	.9026	.906
Drugs	13	Y	.7543	.5676	.873
Legal	5	Y	.6768	.4328	.863
Family/social	13	Y	.7118	.2735	.896
Psychiatric	11	Y	.8708	.7886	.931

We can see that consistency for CSs with few items but including the 2 patient evaluation items, gets inflated:, especially the Medical, Legal, & Family/social domains. The 2 items appear merely asking the same, or at least evoking the same response, as the correlation between the items over the domains is approximately .9.

A.1.2.2 CI Clinical Indexes

A more formal approach to develop scales for the ASI domains was exploited by (McDermott et al., 1996). In order to have the scales reflect problems they first 16 eliminated items not reflecting problems and some items because of other reasons thus leaving a pool of 128 items that could be analyzed. In their first step which was guided by the criteria of achieving domain scores with an alpha of at least .70, item not suppressing internal consistency, and item correlation with total scale score between .20 and .80, another 53 items were eliminated.

Table 6 Clinical indices

Domain	n items	Inclusion of 2 patients evaluation items	alpha
Medical	7	Y	.79
Employment/support	3	Y	.85
Alcohol	11	Y	.84
Drugs	7	Y	.78
Legal	11	Y	.71
Family/social	15	Y	.77
Psychiatric	20	Y	.90

A.1.2.3 EI Evaluation Indexes

(Alterman et al., 1998) constructed what they call EIs Evaluation Indices as alternative to the criticized CSs. They summarize problems with CSs as: (a) Other researchers than the original developers reported *low internal consistency levels*, notably for the domains: employment/support, legal, drugs and family/social ((Alterman et al., 1994), (Hendriks, Kaplan, van Limbeek, & Geerlings, 1989),(Hodgins & el Guebaly, 1992). As we can seen in Table 5 these are the CS with lowest alphas in the DENS sample. Research among outpatients with severe mental illness showed low consistencies for almost all CSs (Carey, Cocco, & Correia, 1997). (b) *Lack of standardization*, which makes it difficult to interpret the score for the indices. They are arithmetically constructed

to have a range form 0 to 1, but given the fact that the indices are constructed as an addition of items scores, it implies that for indices with more items more problem behaviors have to be scored to reach at the same level of the composite score than for an composite score made up of lesser items.

In line with the approach taken by (McDermott et al., 1996) for the CIs as alternative for the ISRs, the authors developed 5 Evaluation indices as alternative for the CSs. The EIs are meant to produce scores on the current status (or last 30 days) of a patient as are the CSs, so from the analyses background items were eliminated. The domains medical and employment/support could not be scaled by their approach.

Table 7 Evaluation Indexes

Domain	n items	Inclusion of 2 patients evaluation items	alpha
Medical	-		
Employment/support	-	-	-
Alcohol	6	Y	.90
Drugs	9	Y	.84
Legal	4	Y	.75
Family	7	Y	.79
Psychiatric	9	Y	.84

A.1.2.4 PSR Predicted severity rating

To be complete, we also have to mention the PSR the Predicted Severity ratings ((Butler et al., 1998). In an attempt to justify computer-administered ASI, but still to be able to have ISRs, they constructed by meansof regression equations predictors for the ASI. However they fail to mention the exact items that are in the equations so we can't report them in our table. However from their initial inclusion of items for each ISR, it is clear that the patient evaluation items do play the most prominent role. It is remarkable that they do not refer to the CIs (Clinical Indices) of (McDermott et al., 1996), which also constitute computed alternatives to the ISRs.

A.1.3 Conclusion

We have presented these indices to make clear, that in contrast to what many people think, ASI is not a measurement instrument in the sense that it can produce validated, reliable, normalized scores for each of the 7 domains following scoring instructions from test developers. Although the ISRs do give a summary score for each domain, they are ratings themselves, conceptually unclear, and unreliable. The CSs have inherent problems, and the CIs and Eis are mere post hoc published clustering of items based on psychometrically sophisticated factor analytic studies that cannot make up for the inherent deficiencies of ASI as a measurement instrument. Wat emerges is a confusing pictures of summary indices that does not contribute to a better understanding of the phenomena under study. The interested reader is referred to Appendix I for an overview of the items and the computations. The manual of the European version of the ASI, the EuropaASI even states that "The composite scores for the EUROPASI still have to be developed" (Blanken et al., 1996; Blanken et al., 1994).

A.2 Clinical Interview, survey instrument, or self administered computerized questionnaire

On the SORAD Stockholm conference, there were many who praised the ASI as a tool to get in contact with a patient. Patient's views were taken seriously et cetera. This clearly is the conception of the ASI as a clinical interview. Meanwhile the instrument is also widely applauded as a completely automatically and economically self-administered instrument which gives the possibility to "Clinicians received automated printed reports

immediately after their patients completed the clinician-administered ASI. The automated self-administered ASI is easy to use for outcomes tracking, as well as cost-and time-efficient," Brodey said. "These features will benefit clinic directors, government agencies, and any facility required to use the ASI." and "the use of the technology frees clinicians from the time-consuming work involved with traditional information gathering methods." "The plan is that by March 2003 we will have the ASI and the T-ASI on a Web site so people can take the survey from anywhere in the world," he said. ASI is here a survey instrument to "measure" outcome? see also http://www.telesage.com/asigrant.html.

So it is clear that arguments in favor of the ASI has little to do with the instrument itself. Apparently people use it just as they want and all is explained as being in favor of the ASI.

A.3   Other things, varia

A.3.1   Psychiatric section

Project MATCH only used the psychiatric, family social relations (and history), and legal questions from the ASI. However in their analysis they only used the psychiatric composite score although they had to conclude that its reliability was not high, probably due to a large amount of asymptomatic respondents.

A.3.2   Medical section

In the recent Dutch trial on heroin prescription the health symptoms scale of the MAP was preferred to the ASI medical section. These are specially tailored for a drug dependent population. Another often seen alternative to Health status is the SF-12 (e.g. Moos, PREDI concurrent validity).

A.3.3   Incorrect use of ISR

Patients with a severity score of 5 of higher on either the alcohol or drug section were considered substance abusers (SA+) and those with severity scores of 4 or lower on both sections were considered non substance abusers (SA-) (van den Bosch, Verheul, Schippers, & van den, 2002) In this example, the diagnostic label substance abuse is used and defined by the ISR of the ASI, which is given the definition of the iSR certainly not correct.

A.3.4   Use of single items vs composite indexes

Furthermore what is often seen with ASI use is that only 1 or 2 items of the ASI are used as outcome criteria instead of the scale score. For instance the heroin prescription study, but in may studies, we see the use of the ASI as a measurement instrument and not any of the composite indexes is used, but merely selected single items.

A.3.5   Use of ASI in Intake Module of Scoring Results

In this protocol for indication and patient placement(de Wildt, Schramade, boonstra, & Bachrach, 2002), indication of patients to levels of intensity of care is ruled by treatment history, addiction severity, severity of comorbid psychopathology, and degree of social integration. An extended version of EuropASI is used to assess these variables. The extension includes a section on gambling from Hartgers (1994) that's is modeled after the original ASI sections like the version of (Lesieur & Blume, 1992), thereby extending the ASI number of domains to 8, that also includes an ISR (Lesieur et al., 1992) even define a CS .

Also added are medication and use of nicotine as separate domains totaling (10).

Moreover, financial situation, housing, and leisure activities as three new sections or domains, (totaling to 13), Ending up with an instrument, still called (Europ)ASI, but with 13 domains instead of the original 7 of which

information on content construction, reliability and validity is lacking.

Operationalization of the indication variables and definition of cut off points as used in the Jellinek are given, however without any justification:

Treatment history is defined as number of treatments in the last 5 years thus creating incompatibility with the ASI that counts number of treatments lifetime. Whether this deviant definition is recorded separately or is just filled out in the ASI items is unknown.

Severity of addiction is recoded in three categories low, moderate, high, corresponding to ISR scores 1-3, 4-6, 7-9. If more addiction areas are at stake (gambling, medicines, nicotine), severity is high when two areas score ≥ 5, or three areas ≥ 4.

Severity of comorbid psychopathology is recoded in three categories low, moderate, high, corresponding to ISR scores 1-3, 4-5, 6-9 on the ASI psychiatric.

Level of social integration is defined as the mean of the ISRs on the two ASI domains Employment/support, Family/social and the three new sections Financial situation, Housing, and Leisure activities, and then recoded to low, moderate, high, corresponding to the mean of the 5 ISRs 1-3, 4-5, 6-9.

The intake module also contains sections dealing with diagnostic assessment by specialists, i.e. medical doctor, psychiatrist, psychologist, or system therapist. Criteria for referring to these extended diagnostic services are loosely formulated and not formally based on the EuropASI results. One would think that the ISRs should be able to provide guidance for these referrals.

Table 8 ASI items and their use as "objective" items, critical items, their use in clinical index, composite score, evaluation index and their exclusion in Lite version and Follow-up version of ASI

Objective items	when stated in the manual as objective item, an **o** is entered.
Critical items	when stated in the manual as critical item, a **C** is entered.
Clinical index (A.1.2.2)	factor loading is entered followed by section letter, e.g. **.43 a** (alcohol)
Composite score (A.1.2.1)	cs is entered with a preceding letter of the section, e.g. **lcs** = legal composite score.
Evaluation index (A.1.2.3)	factor loading is entered followed by section letter, e.g. **.43 d** (drugs)
Ex-Lite:	when not included in the lite-version an **x** is entered
Ex-FUP:	when not included in the follow-up-version an **x** is entered

Section	Name	"Objective" items	Critical	CI Clinical index	CS Composite Score	EI Evaluation index	Ex Lite	ex FUP	Label
General	G4								Date of admission
	G5								Date of interview
	G8								Class: intake vs. follow-up
	G9								Contact code
	G10								Gender
	G12								Special termination of interview
	G14A								# years lived at this address?
	G14B								# months lived at this address?
	G15								Address owned by you/your family?
	G16								Date of birth
	G17								Race
	G18								Religious preference
	G19								In controlled environment past 30?
	G20								# days in controlled environment?
	G50								modality
Medical	M1	o	C	.40					# hospitalizations for med. problem-life?
	M2A	o					x		Years since last hospitalization?

Section	Name	"Objective" items	Critical	CI Clinical index	CS Composite Score	EI Evaluation index	Ex Lite	ex FUP	Label
	M2B	o					x		Months since last hospitalization?
	M3A	o	C	.76				x	Have any chronic medical probems?
	M4A	o		.65					Regularly take prescribed medication?
	M5A	o		.41					Receive pension for physical disability?
	M6	o		.75	mcs				Days experienced med. problem-30?
	M7			.84	mcs				How troubled by med. problems-30?
	M8			.83	mcs				How important is tx for med. problems?
	M9						x		Interviewer: need for med. Treatment?
	M10								Info distorted by misrepresentation?
	M11								Info distorted by inability to understand?
Employment/support	E1A	o	C						Years of education completed?
	E1B	o							Months of educatio completed?
	E2	o	C						Months of training/technical education?
	E3A	o	C				x		Have a profession, trade, or skill?
	E4	o			ecs				Do you have a valid driver's license?
	E5	o			ecs				Do you have an automobile available?
	E6A	o	C						Years of longest full time job?
	E6B	o							Months of longest full time job?
	E7A	o							Usual (or last) occupation?
	E8	o					x		Someone contribute to your support?
	E9	o							This constitutes majority of support?
	E10	o	C					x	Employment pattern, past 3 years?
	E11	o			ecs				Number of days paid for working-30?
	E12	o			ecs				Money received from employment-30?
	E13	o							Unemployment compensation-30?
	E14	o							Money from welfare-30?
	E15	o							Money from pension, social security?
	E16	o							Money from mate, family, or friends-30?
	E17	o			lcs	.57 d			Money from illegal sources-30?
	E18	o							Number of people depend on you - 30?
	E19	o		.84					Days having employment problems-30?
	E20			.91					How troubled by employment problem?
	E21			.88					How important is counsel for employment problem?
	E22						x		Interviewer: need for employment counseling?
	E23								Info distorted by misrepresentation?
	E24								Info distorted by inability to understand?
Alcohol/Drugs	D1A	o	C	.75 a	acs	.85 a			Days used alcohol past 30 days?
	D1B	o	C	.56 a					Years used alcohol lifetime?
	D1C	o	C						Route of alcohol administration?
	D2A	o	C	.76 a	acs	.88 a			Days used alcohol to intoxication past 30 days?
	D2B	o	C	.61 a					Years used alcohol to intoxication lifetime?
	D2C	o	C						Route of alcohol to intoxication?
	D3A	o	C	.80 d amount of drug used	dcs	.70 d			Days used heroin past 30 days?
	D3B	o	C						Years used heroin lifetime?
	D3C	o	C						Route of heroin administration?
	D4A	o	C		dcs				Days used methadone past 30 days?
	D4B	o	C						Years used methadone lifetime?
	D4C	o	C						Route of methadone administration?
	D5A	o	C		dcs				Days used opiates/analgesics past 30 days?
	D5B	o	C						Years used opiates/analgesics lifetime?
	D5C	o	C						Route of opiates/analgesics administration?
	D6A	o	C		dcs				Days used barbiturates past 30 days?
	D6B	o	C						Years used barbiturates lifetime?

Section	Name	"Objective" items	Critical	CI Clinical index	CS Composite Score	EI Evaluation index	Ex Lite	ex FUP	Label
	D6C	o	C						Route of barbiturates administration?
	D7A	o	C		dcs	.41 p			Days used sedatives past 30 days?
	D7B	o	C						Years used sedatives lifetime?
	D7C	o	C						Route of sedatives administration?
	D8A	o	C		dcs	.66 d			Days used cocaine past 30 days?
	D8B	o	C						Years used cocaine lifetime?
	D8C	o	C						Route of cocaine administration?
	D9A	o	C		dcs				Days used amphetamines past 30 days?
	D9B	o	C						Years used amphetamines lifetime?
	D9C	o	C						Route of amphetamines administration?
	D10A	o	C		dcs				Days used cannabis past 30 days?
	D10B	o	C						Years used cannabis lifetime?
	D10C	o	C						Route of cannabis administration?
	D11A	o	C		dcs				Days used hallucinogens past 30 days?
	D11B	o	C						Years used hallucinogens lifetime?
	D11C	o	C						Route of hallucinogens administration?
	D12A	o	C						Days used inhalants past 30 days?
	D12B	o	C						Years used inhalants lifetime?
	D12C	o	C						Route of inhalants administration?
	D13A	o	C		dcs				More than 1 substance/day past 30 days?
	D13B	o	C						More than 1 substance per day lifetime?
	D14	o					x		Interviewer: which is the major problem?
	D15	o	C				x		How long was your last abstinence?
	D16	o	C				x		How long ago did this abstinence end?
	D17	o	C	.25 a				x	# times have had alcohol DT's?
	D18	o	C				x		# times have overdosed on drug?
	D19	o	C	.43 a					# times in life treated for alcohol abuse?
	D20	o	C	.37 d					# times in life treated for drug abuse?
	D21	o		.40 a					# of treatments for alcohol detox only?
	D22	o		.25 d					# of treatments for drug detox only?
	D23			.69 a	acs	.73 a			Money spend on alcohol past 30 days?
	D24			.69 d		.74 d			Money spend on drug past 30 days?
	D25								Days treated as OP for alcohol/drug-30?
	D26			.75 a	acs	.75 a			Days experienced alcohol problems-30?
	D27			.82 d	dcs	.68 d			Days experienced drug problems-30?
	D28			.80 a	acs	.72 a			How troubled by alcohol problem-30?
	D29			.85 d	dcs	.57 d			How troubled by drug problem-30?
	D30			.78 a	acs	.67 a			How important is tx for alcohol problems?
	D31			.67 d	dcs	.47 d			How important is tx for drug problems?
	D32						x		Interviewer: severity of alcohol problem?
	D33						x		Interviewer: severity of drug problem?
	D34								Info distorted by misrepresentation?
	D35								Info distorted by inability to understand?
Legal	L1	o						x	Admission prompted by justice system?
	L2	o		.35		.54			Are you on parole or probabion?
	L3	o	C						# arrests for shoplifting/vandalism, lifetime?
	L4	o	C	.60					# arrests for parole/probation violations?
	L5	o	C	.47					# arrests for drug charges lifetime?
	L6	o	C						# arrests for forgery lifetime?
	L7	o	C	.64					# arrests for weapons offense lifetime?
	L8	o	C	.43					# arrests for burglary/larceny, lifetime?
	L9	o	C	.65					# arrests for robbery lifetime?
	L10	o	C	.58					# arrests for assault lifetime?
	L11	o	C						# arrests for arson lifetime?
	L12	o	C						# arrests for rape lifetime?

Section	Name	"Objective" items	Critical	CI Clinical index	CS Composite Score	EI Evaluation index	Ex Lite	ex FUP	Label
	L13	o	C	.36					# arrests for homicide lifetime?
	L14	o	C						# arrests for prostitution lifetime?
	L15	o	C						# arrests for contempt of court lifetime?
	L16	o	C						# arrests for other lifetime?
	L17	o	C						# charges resulted in convictions lifetime?
	L18	o							# times disorderly conduct lifetime?
	L19	o							# times charged drunk driving lifetime?
	L20	o							# times major driving violations lifetime?
	L21	o		.76					# months incarcerated lifetime?
	L22	o					x		How long was your last incarceration?
	L23	o					x		What was the last incarceration for?
	L24	o	C		lcs	.75			Presently awaiting charges, trial/sentence?
	L25	o	C						Reason for presently awaiting charges?
	L26								Days detained/incarcerated-30?
	L27		C		lcs	.67 d			Days illegal activities for profit-30?
	L28			.30	lcs	.90			How serious are present legal problems?
	L29			.29	lcs	.86			How important is counsel-legal problem?
	L30						x		Interviewer: serverity of legal problem?
	L31								Info distorted by misrepresentation?
	L32								Info distorted by inability to understand?
Family/social	F1								Marital status?
	F2A		C				x		Years in this marital status?
	F2B						x		Months in this marital status?
	F3		C	.36	fcs				Are you satisfied with this situation?
	F4	in the manual is not stated which items are the objective items							Usual living arrangements past 3 years?
	F5A		C				x		Years living in these arrangements?
	F5B						x		Months living in these arrangements?
	F6		C	.40					Satisfied with these living arrangements?
	F7								Live with anyone having alcohol problem?
	F8								Live with anyone using nonprescribed drug?
	F9								With whom do you spend most of your free time?
	F10		C	.44					Satisfied spending free time this way?
	F11						x		How many close friends do you have?
	F12						x		Close reciprocal relation with mother?
	F13						x		Close reciprocal relation with father?
	F14						x		Close reciprocal relation with siblings?
	F15						x		Close reciprocal relation with spouse?
	F16						x		Close reciprocal relation with children?
	F17						x		Close reciprocal relation with friends?
	F18A				fcs	.55			Problem get along: mother-30 days?
	F18B		C	.40					Problem get along: mother lifetime?
	F19A				fcs				Problem get along: father-30 days?
	F19B		C						Problem get along: father lifetime?
	F20A				fcs	.52			Problem get along: sibling-30 days?
	F20B		C	.41					Problem get along: sibling lifetime?
	F21A				fcs	.42			Problem get along: spouse-30 days?
	F21B		C	.46					Problem get along: spouse lifetime?
	F22A				fcs				Problem get along: children-30 days?
	F22B		C						Problem get along: children lifetime?
	F23A				fcs	.53			Problem get along: other family member-30 days?
	F23B		C						Problem get along: other family member lifetime?
	F24A				fcs				Problem get along: friend-30 days?
	F24B		C	.47					Problem get along: friend lifetime?
	F25A			.33	fcs				Problem get along: neighbor-30 days?
	F25B		C	.45					Problem get along: neighbor lifetime?

Section	Name	"Objective" items	Critical	CI Clinical index	CS Composite Score	EI Evaluation index	Ex Lite	ex FUP	Label
	F26A				fcs				Problem get along: coworker-30 days?
	F26B		C						Problem get along: coworker lifetime?
	F27A						x		Emotionally abused past 30 days?
	F27B						x		Emotionally abused lifetime?
	F28A							x	Physically abused past 30 days?
	F28B							x	Physically abused lifetime?
	F29A							x	Sexually abused past 30 days?
	F29B							x	Sexually abused lifetime?
	F30		C	.39	fcs	.62			Days serious conflict with family-30?
	F31		C	.41					Days serious conflict with others-30?
	F32			.67	fcs	.72			How troubled by the family problems?
	F33			.69					How troubled by the social problems?
	F34			.68	fcs	.66			How important is counseling for family problems?
	F35			.67					How important is counseling for social problems?
	F36						x		Interviewer: Severity of family/social problems?
	F37								Info distorted by misrepresentation?
	F38								Info distorted by inability to understand?
Psychiatric	P1	o	C	.54					# times IP tx for emotional problems?
	P2	o							# times OP tx for emotional problems?
	P3	o		.50					Receive pension for psychiatric disability?
	P4A	o	C	.65	pcs	.68			Had serious depression etc.-30?
	P4B	o	C	.65					Had serious depression etc. lifetime?
	P5A	o	C	.70	pcs	.65			Had serious anxiety etc.-30?
	P5B	o	C	.67					Had serious anxiety etc.,lifetime?
	P6A	o	C	.40	pcs				Had hallucinations, past 30 days?
	P6B	o	C	.51					Had hallucinations, lifetime?
	P7A	o	C	.60	pcs	.47			Had trouble understanding-30?
	P7B	o	C	.59					Had trouble understanding, lifetime?
	P8A	o	C	.40	pcs				Had trouble control violent behavior-30?
	P8B	o	C	.52					Had trouble control violent behavior lifetime?
	P9A	o	C	.41	pcs	.60			Had serious thoughts of suicide-30?
	P9B	o	C	.65					Had serious thoughts of suicide, lifetime?
	P10A	o	C		pcs				Attempted suicide, past 30 days?
	P10B	o	C	.57					Attempted suicide, lifetime?
	P11A	o	C	.40	pcs	.55			Medication for psyhiatric problems-30?
	P11B	o	C	.63					Medication for psychiatric problems lifetime?
	P12			.69	pcs	.73			# days had psychiatric problems-30?
	P13			.80	pcs	.73			How troubled by psychiatric problems-30?
	P14			.79	pcs	.70			How important is tx for psychiatric problem?
	P15						x		Obviously depressed at interview?
	P16						x		Obviously hostile at interview?
	P17						x		Obviously anxious at interview?
	P18						x		Had trouble with reality at interview?
	P19						x		Had trouble comprehending at interview?
	P20						x		Had suicidal thoughts at interview?
	P21						x		Interviewer: severity of psychiatric problems?
	P22								Info distorted by misrepresentation?
	P23								Info distorted by inability to understand?