MANAGEMENT OF "DUAL DIAGNOSIS" PATIENTS: CONSENSUS, CONTROVERSIES AND CONSIDERATIONS

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ABSTRACT

The term 'dual diagnosis' denotes the coexistence of substance use disorder(s) and other, non-substance-use, psychiatric disorder(s). The last two decades, and especially the 1990s, have witnessed tremendous research and clinical interest in this previously neglected area. India, however, lags behind, in spite of indications that the problem exists here too. The current approach to managing such patients is the 'integrated treatment model' in which the same clinician (or team of clinicians) provides treatment for both the disorders at the same time, treating both with equal understanding and importance. Both pharmacotherapy as well as psychosocial therapies are specifically designed keeping in mind the 'integrated' philosophy of treatment. The specific principles and components are described. Areas of difficulty, uncertainty, and future considerations are highlighted, with a note on the Indian setting.

Key words Diagnosis, dual (psychiatry), management

The term 'dual diagnosis' is a broad term that indicates the simultaneous presence of two independent medical disorders. This is based on the concept of 'comorbidity' and, in its broadest sense, the two terms are synonymous. However, for the last two decades or so, within the fields of mental health, psychiatry and addiction medicine, the term "dual diagnosis" has been popularly used to describe the coexistence of substance use disorder(s) and other psychiatric disorder(s). Ries (1995) listed various other equivalent terms denoting the same combination: dual disorder, mentally ill chemical abusers (MICA), mentally ill substance abusers (MISA), chemical abuse and mental illness (CAMI), and substance abusing mentally ill (SAMAI). Of all these similar sounding names, the term 'dual diagnosis' seems to have survived the best. In fact, the National Library of Medicine, Washington, D.C., while publishing their Medical Subject Headings (MeSH) for both Index Medicus and MEDLINE, introduced the term "Diagnosis, dual (psychiatry)" for the first time in 1994, keeping in view the increasingly large number of publications in this area (earlier, these papers used to be cited under the broad umbrella term of 'comorbidity' that included all possible comorbid conditions and not just 'dual diagnosis' as we understand it now). Uptill August 1999, there were 525 references under this MeSH alone, i.e., about a hundred indexed publications a year! (A manual search reveals more articles, both in indexed and non-indexed journals). This is just one indicator of the growing importance of this topic in the recent years.

Given this background, it is surprising to note the near-absence of relevant published scientific material from India. Is it due to lack of the problem or to lack of the awareness of the problem? The scanty literature available from India (reviewed later) argue against the first possibility. Lack of awareness may be a more plausible reason. The initial spurt of research in this area came from the USA, followed by gradually spreading awareness (and research) from Canada, Mexico, South America, Australia,
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Europe and UK (Johnson, 1997; Hall & Farell, 1997; Heather & Gilvary, 1998; Krausz et al., 1999). It is time that Indian researchers in the area of mental health and substance abuse also woke up to the reality and to meet the challenge. This review article aims to contribute to the awakening of this interest.

EPIDEMIOLOGY

To date, numerous epidemiological studies have been carried out on dual diagnosis (Regier et al., 1990; Kessler et al., 1996, 1997; Markkangas et al., 1998; Bucholz, 1999; Dixon, 1999). These studies have been carried out on two types of population i.e. 'general' and 'clinic-based'. It, however, needs to be emphasized here that the wealth of data in relation to prevalence and patterns emanates from the USA.

USA based rates

General population studies have reported slightly varying lifetime rates of comorbidity - 60% (Regier et al., 1990) to 79% (Kessler, 1995); the patterns of comorbidity, however, show strong agreement.

The ECA study (Regier et al., 1990) found high odds ratios for lifetime comorbidity for antisocial personality disorder, bipolar disorder, and schizophrenia in males; for phobias and depressive disorders in females. Similar trends have been seen in the National Comorbidity Survey (Kessler et al., 1996, 1997).

On the other hand, clinic-based studies have reported very high rates in psychiatry settings (ranging from 23-80%), but values are on the lower side in addiction settings i.e. 0.6-6% (Miller & Fine, 1993). The discrepancy is due to different referral and intake patterns.

European rates

Studies are mostly on patients with psychosis/schizophrenia with rates ranging from 22% (Duke et al., 1994) to 43% (Soyka et al., 1993). A latest study on a clinic sample of opioid addicts found 51% to have at least one non-substance related psychiatric disorder, the commoner ones being phobic disorder, other anxiety disorders, and depressive episodes (Krausz et al., 1999).

Indian rates

The earliest study from India is also, interestingly, the only general population study so far (Dube & Handa, 1971). In a house-to-house interview-based survey of 16,725 persons in and around Agra, it was found that alcohol and drug abuse (defined as regular use for more than a year) occurred in 4.6% of the 560 mentally ill persons, compared to 2.2% of the non-psychiatric population (i.e., dual diagnosis was doubly prevalent compared to the base rate of substance abuse). The prevalences of substance abuse amongst various psychiatric categories were, in descending order, manic-depressive illness (16%), schizophrenia (14%), organic psychosis (5%), and neurotic and other disorders (2%). Two other earlier studies focussed on rates of substance abuse in hospital-attending patients: one found 23.6% cannabis abuse in 566 consecutive mental hospital admissions (Dube et al., 1975) and the other found 16.4% of substance abuse in 1000 male psychiatric outpatients (Trivedi & Sethi, 1978). Rates were generally higher in affective disorder and schizophrenia.

More recent studies have structured and standardized interview schedules. Mahajan (1993) found lifetime prevalence of psychiatric disorders being 50% in 30 opioid users and 58.6% in 30 alcoholics attending a de-addiction centre; personality disorders were the commonest and more in opioid users. Kishore et al. (1994) reported a lifetime prevalence rate of 60.5% in opioid abusers and alcoholics. Sokhlet & Sharma (1998) found high rates of depression and antisocial personality disorder (ASPD) in heroin users while Sattar et al. (1998) found a prevalence rate of 29% in alcoholics. All these rates are considerably higher than those in the three earlier studies, which may reflect a higher general prevalence of substance abuse over the years. However, the dual diagnosis rates were higher even in the early studies, considering a much lower prevalence of substance abuse in the general population (e.g. 2.2% in Dube & Handa, 1971).

Interestingly, there is only one study (Reddy & Prassana, 1998) which assessed...
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comorbidity of anxiety disorders rather than psychosis or severe mental illness in alcoholics. The authors reported presence of phobias, generalized anxiety disorder and panic disorder (in decreasing order of occurrence) amongst the alcoholics.

Hence, it can be seen from the above data that presence of comorbidity is prevalent to a significant degree for which treatment assumes paramount importance. But, why at all should comorbidity (or dual diagnosis) assume such great importance? Why cannot the two (or more) co-occurring disorders be treated as per the guidelines for each of the individual disorder?

NEED FOR SPECIAL FOCUS ON MANAGEMENT

There are certain factors which necessitate the need to focus on the management of dual-disorder patients.

The patient related factors are—such persons generally belong to lower socio-economic strata (Kay et al., 1989). They have a positive family history of sociopathy or alcoholism leading to a disruptive and chaotic environment (Kay et al., 1989), with increased risk for serious acts of violence (Scott et al., 1998). Poor adjustment (Bartels et al., 1993) leads to increased risk for homelessness (Drake & Wallach, 1989). Also, such patients are hostile and uninterested in mental health services (Ziedonis & Trudeau, 1997), indulge in illegal activities (Johnson, 1997), show lack of responsibility with less concern of societal and moral values (Kay et al., 1989) which leads to poorer compliance (Bartels et al., 1993; Kosten & Ziedonis, 1997; Newman et al., 1998) and symptomatic worsening (Dixon, 1999).

Treatment and outcome issues related to dual diagnosis also influence the need for comprehensive management. Such patients get hospitalized at an early age (Kay et al., 1989), with longer duration of illness (Hall & Farrell, 1997) and frequent relapse and hospitalizations (Johnson, 1997; Tomassan & Vaglum, 1998). They present very frequently to emergency services (Bartels et al., 1993) leading to higher treatment costs (Johnson, 1997). Also, they are frequently incarcerated for legal violations (Safer, 1987) and generally have poorer outcome (Hall & Farrell, 1997; Dixon, 1999).

The physician (psychiatrist) related factors that make management difficult are: (1) mental health providers often refuse to treat such patients until they accept treatment for their substance abuse and achieve sobriety (Harrison et al., 1985); (2) conversely, substance abuse therapists frequently exclude the mentally ill because of their difficult behaviour or because their use of psychotropics is seen as substituting one addiction for another (Harrison et al., 1985); and, finally (3) guidelines for treatment aspects i.e. appropriateness of sequential treatment, choice of sequence, value of pharmacotherapies, timing and enforcement of abstinence during treatment are mostly unclear and arbitrary (Kofoed et al., 1986; Goldsmith, 1999).

CONTROVERSIES IN MANAGEMENT ISSUES

1. Which disorder should be considered more important for purposes of treatment - psychiatric or substance use?
2. Which setting is to be preferred for treatment - psychiatric v/s de-addiction; outpatient v/s inpatient?
3. What are the ideal components or principles of therapy?
4. Who should ideally treat such patients - psychiatrist or de-addiction specialist?
5. What all treatment personnel are needed?
6. Who assumes the funding and administrative responsibility?
7. Is integration of psychiatric and de-addiction treatment services possible?
8. Are the services provided comprehensive, effective and cost-efficacious?

An attempt will now be made to address these controversies by reviewing the considerations and consensus achieved in this area till now. But before that, it is important to understand what systems (or 'models') currently exist for management of such patients. Their deficits in providing the answers to the above questions, and hence the need for an 'integrated' model (Ries, 1993; Mueser et al., 1997, 1998a;
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Drake et al., 1998a; el Mallakh, 1998; Mercer et al., 1998; Siegfried, 1998; Goldsmith, 1999).

EXISTING MODELS OF MANAGEMENT

Serial (or sequential) Model

By definition, one treatment (either psychiatric or addiction) modality is followed by the other.

It is advantageous in that it allows the chemical dependency and mental health system to exist separately, personnel are not required to learn new skills or change basic concepts, billing, administrative and treatment facilities remain separate, is coherent with the previous model of separation of treatment system and is consistent with the administrative structure.

However, the disadvantages associated with this system are that it cannot address individual patient needs, patients are frequently provided with contradictory information, explanations and therapies, there are chances of numerous potential conflicts with little scope for resolution of the same, and it requires different treating teams to know about the treatment plans of each other. Most importantly, this serial treatment approach becomes a common clinical justification for exclusion from treatment rather than an explicit treatment model. In this approach, dually diagnosed patients are told they are not eligible for treatment in one part of a system until they resolve the other problem first (Mueser et al., 1998a); thus, "the schizophrenic with alcoholism might not be admitted to either a pure psychiatric unit or a pure chemical dependency unit because of being too psychotic for the latter or too intoxicated for the former unit" (Ries, 1993). This approach rigidly defends programme boundaries while ignoring individual patients and larger systems needs; the patient often keeps on shuttling between the psychiatric and the de-addiction units without any tangible relief in either of his problems due to this unfortunate process derisively dubbed as "ping-pong therapy" (Osher & Kofoed, 1989).

Parallel Model

By definition, there is concurrent but separate treatment of both psychiatric disorders and addictive disorders.

Its advantages are that it does not require large administrative and system changes, and, perhaps, starts to force integration of the concepts of different treatments thereby creating less conceptual conflicts in the patient. In theory, this should work well. In practice, however, such conceptual integration between the two parallel components of treatment rarely occurs, and "the burden of integration has either fallen on the patient, or, more likely, has not occurred at all" (Mueser et al., 1998a). For example, the use of affectively charged, confrontational approaches has been common among substance abuse treatment providers, while that may be unproductive or even counterproductive when working with patients with severe mental illnesses.

The parallel model thus suffers from the following disadvantages: it requires more therapists and system changes, it is not properly operational in larger treatment systems, tendency for conflicts during treatment can be pointed out by patients, it requires broadening of knowledge of therapist, the excessive load of therapy creates stress on the patient, and overall it is cost-inefficient and expensive (Ries, 1993; Ries et al., 1997; el-Mallakh, 1998; Mueser et al., 1998a).

Thus, because of the numerous problems evident in both the serial and parallel treatment systems, by the end-1980s and early 1990s several authors in the USA started advocating some kind of 'integration' of the mental health and addiction treatment approaches to create a comprehensive model of care (Osher & Kofoed, 1989; Rosenthal & Miner, 1997; Ries, 1993). This amalgam of ideas and programs came to be known as an "integrated model" of dual diagnosis management. Although specific aspects of this model as advocated by these different authors differed to some extent, general consensus seems to have emerged regarding the definition and the essential elements (or principles) of this model, which are described below (Galanter et al., 1994; Ries et al., 1997; Mueser & Fox, 1998; Mercer et al., 1998).
THE INTEGRATED MODEL

Definition

The integrated treatment program can be defined as a program in which the same clinician (or team of clinicians) provides treatment for both the mental illness and the substance use disorder at the same time (Mueser et al., 1998a). This clinician (or team) assumes responsibility for integrating the mental health and substance abuse treatments so that the interventions are selected, modified, combined, and tailored for the specific patient. Because the educational and prescriptive message is integrated, there is no need for the patient to reconcile two messages (which is a disadvantage with the parallel system described earlier). It should be clear that integration does not mean simply that two agencies or programs merely agree to collaborate.

Elements (principles) of integrated model

(Mueser et al., 1998a; Mercer et al., 1998)

Assertive Outreach: It is needed as dual-disordered patients are generally noncompliant and unmotivated for treatment. Also, it helps to address substance abuse as the central destabilizing factor for mental illness and related treatment. It generally involves active intervention with emphasis on outreach and practical assistance. A method employed is by use of “Continuous treatment teams” (Drake et al., 1991) which take full responsibility of a small group of patients.

Close Monitoring: This refers to intensive supervision which is required to initiate and sustain early treatment. Psychopharmacological treatments and urine drug tests can be supervised. Whether voluntary or involuntary, this component is the key in the treatment of dual diagnosis patients.

Comprehensiveness: In this, not just the specific manifestations of a disorder, but a wide range of skills, activities, relationships, and supports are addressed. This is important for dually-diagnosed patients as they are deficient in various issues associated with stable recovery.

Stable Living Situation: There is a need for such patients to have access to a range of housing options that provide safety, freedom from drugs, support and companionship.

Flexibility and Specialization: Clinicians specializing in one type of treatment program need to adopt and successfully implement components of the other treatment program.

Stages of treatment: Although a stage model has more of heuristic service, yet it helps in guiding clinicians in planning and deciding what interventions are appropriate at a particular point in time. Hence, the four stages of Osher and Kofod (1989) need to be remembered viz.

(a) Engagement - developing a trusting relationship or working alliance

(b) Persuasion - helping the patient to perceive the adverse consequences of substance use in one’s life and to develop motivation for recovery

(c) Active treatment - helping the patient to achieve stable recovery

(d) Relapse prevention - maintain the stable recovery

The long-term perspective: This is important as both illnesses have a chronic, relapsing course. Treatment generally is spread over years as recovery is very unlikely in the first year of treatment.

Optimism: There are high chances of demoralization and pessimism developing in the patients, family members, and treating clinicians. Pessimism of the patient can even be taken as “poor motivation” by the treating team. Hence, one should always have hope for recovery.

Table 1 summarizes the characteristics of the three models with respect to the questions raised earlier.

Components of integrated model of management

Effective, integrated dual diagnosis management includes several components that require new expertise and programmatic content (e.g., dual diagnosis assessment, individual clinical case management, and group intervention). Other components require modification of existing services to meet special needs of these patients (e.g., pharmacotherapy, family interventions, rehabilitation, and crisis management). Brief notes on some of these...
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#### TABLE 1

**ISSUES IN DUAL DIAGNOSIS MANAGEMENT: COMPARISON OF THE THREE TREATMENT APPROACHES (MODELS)**

| Issues                                                                 | Serial                          | Parallel                                 | Integrated                               |
|------------------------------------------------------------------------|---------------------------------|-----------------------------------------|------------------------------------------|
| Which is more "important" for treatment: psychiatric or substance abuse? | Depends upon individual concept and preference of the treating agency | Both                                    | Both                                     |
| Which setting is preferred: psychiatric or deaddiction?                | One after another (patient often gets rejected from either) | Both concurrently but separate from each other | Single setting where treatment for both are integrated |
| What are the ideal principles of therapy?                              | Control of one disorder followed by another (often, none occurs first) | Control of both together though separately (patient often gets contradictory messages) | See text                                 |
| Who should treat: psychiatrist or addiction specialist?                | One followed by the other        | Both concurrent but separately (as above) | A single person or single team (usually led by a psychiatrist) |
| What all treatment personnel are needed?                               | Those for the usual setting (no special or cross discipline training required) | As in serial | Psychiatrist, clinical psychologist, psychiatric social worker (all with cross discipline special training) |
| Funding and administrative responsibility                               | Separate                        | Separate                                | Combined                                 |
| Are the services provided:                                            | Usually not                     | often not                               | aims to be                                |
| --- comprehensive?                                                     | not demonstrated                | not demonstrated                        | demonstrated and replicated              |
| --- effective?                                                         |                                 |                                        | immediately not (high cost)              |
| --- cost-efficient?                                                    |                                 |                                        | but later becomes efficient (more research needed) |

#### TABLE 2

**A TENTATIVE LIST OF MEDICATIONS PROBABLY USEFUL FOR DUAL DIAGNOSIS PHARMACOTHERAPY**

| Psychiatric Disorder | Medication | Possible benefit in substance use                  | Remarks |
|----------------------|------------|----------------------------------------------------|---------|
| Schizophrenia        | Clozapine  | Alcohol, cocaine, nicotine                         | Pre-clinical studies; open-label studies in humans; controlled studies in progress; few controlled studies available |
|                      | Tiapride   | Alcohol                                            |         |
| Bipolar disorder     | Lithium    | Alcohol                                            | Few controlled studies; contradictory reports for lithium, small numbers for carbamazepine |
|                      | Carbamazepine | Alcohol                                          |         |
| Unipolar depression/dysthymia | Imipramine | Alcohol                                      | Double-blind controlled studies; modest effect on drinking parameters (do- plus ?anti-craving effect) |
|                      | SSRIs (esp. fluoxetine) | Alcohol                          |         |
|                      | Buspiron   | Nicotine                                           | Double-blind controlled studies; need replication |
| Anxiety disorders    | Benzodiazepines | Withdrawal management, esp. alcohol | Risky to continue beyond withdrawal due to abuse liability |
|                      | Buspiron   | Alcohol                                            | Non-addictive controlled studies available; modest effect on drinking |
|                      | TCAs & SSRIs | Alcohol                                        | See above |
follow; lengthier discussions are available elsewhere (Galanter et al., 1994; Drake et al., 1998b; Mueser et al., 1998a, Mercer et al., 1998). Assessment: Accurate assessment of the dual diagnosis patients demands techniques that differ from those in single diagnosis cases (Carey & Correia, 1998), and entails assessment for screening, diagnosis and management planning.

Screening can be done either by collateral informants or by self-reports. Regarding the former, two 5-point clinician-rating scales, one for alcohol use and one for other drug use, have been developed. The clinician uses all available information accumulated over a period of up to 6 months to make the ratings. The Alcohol Use Scale and Drug Use Scale (Drake et al., 1996) can be completed reliably and correspond with more intensive interview-based methods of establishing substance abuse diagnoses. However, these are useful only for patients who are in recent contact with some clinician or treatment personnel. In contrast, recently a new interviewer-administered but self-report screening tool has been developed specifically for the identification of substance abuse in suspected dual diagnosis patients, named Dartmouth Assessment of Lifestyle Instrument (DALI; Rosenberg et al., 1998). The preliminary report indicates that it is reliable over time and across interviewers, and more sensitive and specific than standard screening tools such as CAGE and MAST.

Diagnostic assessment is often difficult because of various complex interrelationships between the substance use and psychiatric disorders (Mueser et al., 1998b).

It may be very difficult to distinguish schizophrenia from chronic substance induced psychoses (Rosenthal & Miner, 1997). Rather than concluding prematurely that psychotic symptoms are, or are not, substance-induced, the integrated model advocates that clinicians should initiate treatment of both psychosis and substance abuse in uncertain cases (Shaner et al., 1998).

Management planning assessment may be facilitated by use of the Substance Abuse Treatment Scale (SATS; McHugo et al., 1995). Consistent with the Osher and Kofoed's (1989) stages of changes model of dual diagnosis treatment, the SATS can help the clinician to assess the patient's stage of readiness for treatment, and plan management accordingly.

Individual clinical case management: Many patients with dual diagnosis are not helped by confrontative techniques, the concept of a higher power (as in Alcoholics Anonymous) and the explanatory model of addiction as an illness that is used in conventional substance abuse treatment (Mercer et al., 1998). Individual case management provides patients with motivational support.

Motivational counselling gradually fosters a trusting relationship with the patient. The clinician encourages the patient to identify goals and hopes, fosters awareness of discrepancies between goals and substance use behaviours, guides the patient in developing new skills, and supports the patient's growing self-efficacy. This has to be done at an individual level, taking into account the stage of readiness for change that the patient is in at a particular time (Ziedonis & Trudeau, 1997).

Pharmacotherapy: Medications for both psychiatric and substance use disorders should be integrated with psychosocial interventions in a complementary way. Failure to prescribe needed medications or undermedication can accelerate psychiatric deterioration and/or relapse of substance abuse. On the other hand, this need to medicate properly must be balanced by the caution warranted because of the potential risks of prescription abuse (e.g. benzodiazepines) and of adverse interactions between medications and drugs of abuse (e.g. phenothiazines and alcohol).

In addition, due to the high rate of medication non-compliance in dual diagnosis patients, close monitoring of medication adherence in the community, for example by outreach teams, is often desirable.

The centre for substance abuse treatment (Ries, 1995) has developed several guidelines for integrating pharmacotherapy with psychosocial approaches:...
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1. Begin with non-pharmacologic approaches to manage emerging symptoms of a less severe nature, such as anxiety or mild depression, and add medications if the symptoms do not respond. At the same time, recognize that acute and severe symptoms associated with mania, psychotic or severe depression, and schizophrenia definitely require medications in proper doses.

2. Encourage the use of medications with a low abuse potential: This conservative dictum should again be moderated by the dangers of acute and severe symptoms.

3. Be aware of specific interactions between drugs of abuse or withdrawal syndromes and medication effects. For example, alcohol intoxication and withdrawal can disturb electrolyte balance and affect lithium levels.

Specific pharmacotherapies for dual diagnosis are only now emerging, e.g. use of clozapine for dual diagnosis schizophrenia (Buckley, 1998; Lee et al., 1998), fluoxetine or imipramine for the depressed alcoholic (Cornelius et al., 1997; McGrath et al., 1996). It is heartening to note that recent review articles in reputed journals on drug therapy for alcohol dependence devote an appreciable section on dual diagnosis (e.g. Swift, 1999). Table 2 presents a tentative (and incomplete) list of such medications as are emerging to be specifically relevant to dual diagnosis pharmacotherapy. It must be conceded that replicated large double-blind controlled trials are lacking for many of the medicines mentioned in the table; however, this table may serve as a stimulus for further inquiry as well as for empirical treatment currently.

Finally, Sowers & Golden (1999) have focused on psychological factors interplaying with attitudes towards taking, or rejecting, medications by dual diagnosis patients as well as countertransference of physicians influencing medication prescriptions. Thus, along with pharmacokinetic considerations, psychodynamic factors also can become relevant in pharmacotherapy of dual diagnosis.

Other components of integrated treatment model: Group interventions for substance abuse treatment are major components in most dual diagnosis treatment programs. Their common characteristics are - focus on substance use while maintaining their specific sensitivity to the person with a severe mental illness (Mueser & Noordsky, 1996). They commonly provide psychoeducation and support, social skills training, stage-wise treatment (to engage and persuade patients for reducing or stopping substance use), or a combination thereof.

Family support and family psychoeducation should again combine elements from both psychiatric as well as substance use disorder. For example, training for family members can prepare them with the skills to recognize signs of substance relapse, to manage crises, to prevent and manage violent behaviour, to check and encourage patients' adherence to medication, and to avoid enabling substance use (Mueser & Fox, 1998).

PATIENT-TREATMENT MATCHING: DUAL DIAGNOSIS TYPOLOGY

The above section highlighted the general principles, characteristics and components of integrated approaches to management of dual diagnosis. When it comes to individual patients, however, one has to apply certain discretions in view of the particular circumstances individually relevant to the patients. For example, a patient with chronic and severe schizophrenia who also abuses alcohol needs to be handled somewhat differently from another patient with long-standing severe alcohol dependence presenting currently with a depressive episode. Thus, some kind of patient-treatment 'matching' is required even within the integrated treatment framework keeping in mind the large heterogeneity of this population. One way to deal with this situation is to evolve a dual diagnosis 'typology' that can classify these patients into clinically meaningful subgroups. Only recently have investigators started to evolve such typologies, and obviously more research is needed in this important area.

Ries' Typology (Ries et al., 1997)

This is based on the combination of relative severities of psychiatric vis-a-vis
substance use disorders, namely.
Type I: High-severity psychiatric - high - severity-
substance.
Type II: High-severity psychiatric - low - severity-
substance.
Type III: Low-severity psychiatric - high - severity-
substance.
Type IV: Low-severity psychiatric - low - severity-
substance.
Ries et al. (1997) explained that 'high-
severity psychiatric' means that the patient has
a chronic psychiatric disorder causing major
psychosocial dysfunction (e.g. schizophrenia,
bipolar disorders, recurrent severe depressive
disorders, delusional disorder, and schizotypal
or borderline personality disorders). 'Low-
severity psychiatric' includes uncomplicated
depression, dysthymia, many anxiety disorders,
other personality disorders, and substance-
induced psychiatric disorders. 'High-severity
substance' includes a DSM-IV (or ICD-10) -
diagnosed substance dependence, whereas
'low-severity substance' means those who have
a DSM-IV substance abuse or those with
substance use that has a measurable but minor
impact on their psychosocial function. Based on
a combination of these, the four types would
require individually-tailored management within
the broad framework of an integrated approach.

Zimberg's Typology (Zimberg, 1999)

Very recently, a different typology has
been described, based on the relative
importance of the two types of disorders, either
(or none) being considered as 'primary'.
Type I: primary psychiatric disorder, with
substance use only when psychiatrically
symptomatic (self-medication).
Type II: primary substance use disorder with
substance-induced psychiatric symptoms.
Type III: psychiatric and substance use disorders
both of long duration that are co-occurring or
present at different times (i.e. no 'primary-
secondary' distinction possible).

The author concedes that the 'Type III' is
considered the 'true' dual disorder state. This
typology was found to be reliable and to have
consensual validity. This method was found to
be relatively easy to apply; it also improved staff
interest, differential diagnosis and targeted
interventions.

RESEARCH ON INTEGRATED TREATMENT
OUTCOME

With the proliferation of integrated
treatment programs over the past decade, the
effectiveness of these programs has become the
subject of substantial research (Mueser et
al., 1997, 1998a; Drake et al., 1998a, el Guebaly,
1999; Dixon, 1999). Many of the nearly 40 studies
available to date (mid-1999) are plagued with
small sample sizes, lack of control groups,
definitional and operational problems, high drop-
out rates, and difficulty in reliably and validly
recording the various outcomes; especially
substance use. A recent comprehensive review
on the subject found that out of 36 reports only 7
employed experimental designs, the rest being
quasi-experimental or open clinical trials (Drake
et al., 1998a). However, there are several trends
emerging from this decade-long research output,
as follows:
1. The integrated dual diagnosis programs were
capable of engaging the majority of dually
diagnosed patients in treatment and retaining
them in treatment for 1 year or more.
2. Engagement in programs was associated with
greater improvement in substance use outcomes
compared to patients who dropped out.
3. With several years of treatment, the dual
diagnosis patients demonstrated a consistent
gradual progression towards substance use
reduction and abstinence. Most research on
traditional (serial or parallel) treatment
approaches indicates annual rates of sustained
remission of less than 5%. In comparison, recent
research on integrated programs suggests
significantly higher rates of remission, with
10-20% of these patients achieving stable
remission per year. These remission rates
roughly approximate those seen among in
treatment patients with substance abuse only,
suggesting that integrated treatment many
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eliminate the adverse effect of psychiatric disorder on remission from substance abuse.

4. There is also evidence that improvements in substance use outcomes are associated with gains in a variety of other areas such as psychiatric symptoms, stable community days, and quality of life (Drake et al., 1998b; el-Guebaly, 1999). Issues on which research data are either inadequate, ambiguous or contradictory, include: (a) which specific modality of treatment is most useful, e.g. behavioral skills training, 12-step program, cognitive behavioral therapy etc.; (b) role of inpatient treatment, and for how long, in the overall patient management; and (c) to what extent these 'research' findings, as summarized above, translate themselves into 'routine' clinical care. Also, the patient-treatment matching issues remain, as mentioned earlier.

WHAT ABOUT INDIA?

Johnson (1997) argued that in the UK and Europe, integrated care formulation may be easier as treatment for addiction forms part of the mental health system. However, due to the presence of centralized services with large catchment areas, accessibility and delivery of care can be problematic. Engagement of patients into treatment can be further hampered by absence of some of the coercive methods available in USA. Another problem faced is that published evaluations of specialist services rarely make clear how far these coercive methods have been used to engage patients in treatment.

In India, the existence of de-addiction and mental health systems is either part of each other or placed separately though not distinct. Training for both services is provided though generally the focus is not on specialist de-addiction training, especially for the paraprofessional. Also there are only a few prevalence studies in this area with no mention in literature on the management aspects. Hence, there is a serious and urgent need to focus, develop, integrate, evaluate and finalize management aspects of the 'dually disordered'. Treatment models need to be formulated keeping in mind the variations in trained personnel, economics and commonality of type of disorders encountered. In fact, integration of treatment strategies (based on the integration model) may be the best possible strategy in Indian settings, keeping in mind our social, cultural and economic background. But this may again prove problematic due to the presence of separate funding agencies for psychiatric and de-addiction facilities at the administrative (government) level.

This review, as hinted at in the beginning, aims to be a curtain-raiser. The problems, their consequences, and potential solutions being worked out elsewhere have been highlighted. India is in an advantageous situation since, unlike that in USA, the mental health and addiction treatment systems are not formally segregated here. Many of us, both in the public as well as in the private sectors, are perhaps using some of the principles of the integrated treatment approach already, albeit intuitively. With the further enhancement of collective awareness, better programmes can be devised and implemented for this doubly jeopardized group of patients.

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