Project MATCH: unseen colossus

The largest alcohol treatment trial ever, Project MATCH's value lies more in its unanticipated findings than in what it set out so painstakingly to prove – less in matching treatment technologies to patient variables, more in the human touch and doing whatever you do well.

From Drug and Alcohol Findings issue 1.
Subscriptions and more information
www.drugandalcoholfindings.org or e-mail
findings@drugandalcoholfindings.org

by **Mike Ashton**
Editor, *Drug and Alcohol Findings*.
The author owes a considerable debt to the members of the FINDINGS advisory panel and others who contributed their expertise and experience ▸ *Ackowledgements*, p 19.

In one respect the title of this key study is an exaggeration. Project MATCH's colossal (or, as others have put it, "Titanic"[1, 2]) status is beyond doubt, measured by the conviction that the like of it will never be seen again. Yet it has not overshadowed practice debates to a degree commensurate with its bulk;[3] 'underseen' rather than 'unseen'. Awareness of its implications has been impeded by the volume of the research output and the complexity of the findings.

Some may also have preferred to look the other way. Designed as the definitive test – and anticipated confirmation – of a quarter century's most promising theories about which types of drinkers do best in which types of treatments ('matching'), MATCH seemed to justify the demoralising conclusion that 'It just doesn't matter *what* you do'. "It Ain't Necessarily So" was how the *Journal of Studies on Alcohol* headlined its editorial on MATCH.[4] The shock of solid negative findings colliding with strongly supported expectations led to a splattering effect as theoretical and empirical effort was expended in the search for explanations.

Though not constructed as a test of whether treatment 'works' (there was no untreated control group), affirmation that it did was the considerable crumb of comfort rescued from the $28 million project. It led to questions about what approaches "designed to differ dramatically in philosophy and procedures"[5] might have shared which led to such similar outcomes. The tentative leads on this issue may be the study's most important legacy. At their outer limits, these tend to deconstruct alcohol 'treatment' into more mundane human virtues – the desire to get better, supportive human relationships, competence, friendly persistence and the provision of a culturally endorsed lifeline for a culturally defined problem.

These thoughts emerge from a process which takes us through the study's design and findings, its methodological strengths and limitations, and finally its implications for practice in the UK. First, some advice: MATCH is a multi-layered mega-study, neither effortlessly nor quickly digested, but very filling – a feast rather than a snack. Set aside some time to digest and enjoy.

Research design and findings

Project MATCH tested three psychosocial therapies on 1726 problem drinkers, nearly all diagnosed as dependent. Though disparate in personal characteristics and in the severity of their drinking, they were a relatively 'pure' alcohol problem sample; various forms of comorbidity were excluded.

The therapies were selected to be distinct from each other and for their potential to reveal matching effects. All were delivered on a one-to-one basis in non-residential settings, according to manuals developed by the MATCH team, with abstinence from alcohol as the goal. The project went to extraordinary lengths to ensure that variation in outcomes could not be put down to variation in the quality or extent of treatment.

CAPSULE

- Project MATCH is the largest scientifically rigorous alcohol treatment trial ever seen.
- It tested whether outcomes could be improved by matching clients to one-to-one interventions based on motivational interviewing, AA's twelve steps, and cognitive-behavioural therapy.
- Matching effects were few and modest; motivational therapy was best for angry clients, twelve step for those highly dependent or with pro-drinking social networks.
- Even with 'difficult' clients, the briefer motivational therapy generally performed as well as the more intensive interventions.
- Matching might yet be seen with a wider range of treatments, settings, clients and variables. MATCH's grounding in a medical model of alcohol dependence circumscribed its reach in these respects.
- All the treatments seemed effective with a range of clients; the client's readiness to change had a major positive impact on outcomes.
- Practice implications include making motivational therapy the therapeutic starting point, clearly structuring interventions, and engaging clients in mutual aid networks.
- Generalisability of the findings to the UK is limited by the US context and by the extraordinary measures taken to safeguard the integrity of the research and the treatments.

MATCH's therapies correspond to approaches commonly practised in the UK.[6] Their key features are outlined below. Details are in the manuals, themselves a (if not *the*) major output of the project (▸ *Doing it the MATCH way: the manuals*, p. 20).

- **Twelve-Step facilitation therapy** was newly developed by MATCH but based on the familiar tenets of Alcoholics Anonymous (AA). Over 12 weekly sessions clients were encouraged to accept that they suffered from the disease of alcoholism, to begin working through AA's twelve steps, and, most importantly, outside the sessions to become engaged in Alcoholics Anonymous.
- Also delivered over 12 weekly sessions, **cognitive-behavioural therapy** sees problem drinking as a learnt if maladaptive response to life's problems. The therapy (adapted from an existing guide[7]) aims to reprogramme those responses by teaching coping skills and alternative strategies for handling high-risk situations.
- Delivered in four sessions but still over 12 weeks, **motivational enhancement therapy** was adapted from motivational interviewing.[8] This brief intervention aims to generate motivation for and commitment to change, operationalised as progressing the client through the cycle of change (▸ *Cycling to recovery*, p. 16). If possible, the client's partner was included in the first two sessions.

Clients were randomly assigned to these therapies at treatment sites in two types of settings: in the *outpatient* arm, the MATCH intervention was a standalone treatment; in the *aftercare* arm, clients were referred to MATCH after at least a week's inpatient or intensive day hospital treatment. Intake assessments were followed by outcome evaluations every three months in the first year after treatment. For the *outpatients* only, there was also a three-year follow-up. Re-contact rates and checks on self-reports of drinking lend considerable confidence to the results.

Not a lot of matching

Uncontaminated by prior intensive treatment and followed up over three years, the outpatient arm of the study provides the purest and longest-term test of matching. It is also the one most relevant to UK practice:

here, as in the USA, the pressure is on to achieve results without the expense of residential care. How these patients fared at three years is our prime focus, with other results drawn on for elaboration or confirmation.

After three years 85% of the 952 outpatients completed tests probing 33 predicted matches. Two reached statistical significance. With so many opportunities for matching effects to emerge, these two *may* have done so by purely by chance – just as enough throws of a dice will eventually produce consecutive sixes. However, statistical counterbalances and the fact that both matches 'make sense' increase confidence in their validity.

The first match was that clients high in anger did best after motivational therapy; they had drunk on fewer days in the previous three months (33% compared to 24%) and consumed less when they did drink. This finding was both persistent and in line with the theory being tested. More mysterious was the reverse finding that low-anger clients did *least* well in motivational therapy.

The other match emerged only at three years but was the largest and perhaps most interesting. Clients with social circles highly conducive to drinking did best after twelve step therapy. They drank on 16% fewer days than after motivational therapy and consumed less when they did drink. Twelve step therapy seemed to neutralise pro-drinking social influences partly by fostering AA participation, a ready-made *anti*-drinking social network. In contrast, three years after motivational therapy the influence of a pro-drinking social circle seemed to reassert itself. What of clients with relatively *anti*-drinking social networks? They did *better* after motivational than twelve step therapy.[9]

> ▸▸▸ *honest and fair ... a creative and clinically meaningful way to communicate the trial's implications ... insightful interpretations ... excellent*
>
> Thomas Babor
> Principal Investigator, MATCH Coordinating Center, commenting on this article in draft

The aftercare arm of the study – whose clients had previously undergone intensive treatment – contributed one further match. After one year clients highly dependent on alcohol drank less after twelve step than after cognitive-behavioural therapy; they even fared better than *low* dependence twelve step clients. For low dependence clients, cognitive-behavioural therapy was the better.

In summary, matching effects were few, modest, and none generalised across both arms of the study. In the outpatient arm just two were long-term: the relative efficacy of motivational therapy for highly angry clients, and of twelve step therapy for clients with pro-drinking social networks.

Other seemingly well-founded theories failed the MATCH test. Most predicted that those with more severe problems would do less well in the briefer motivational intervention. But this seemed just as suitable for heavy as for less heavy drinkers; at three years, clients highly vulnerable to dependence were doing *better* after motivational therapy. Clients with greater psychological problems did as well in any of the treatments. However, motivational therapy was no more effective for unmotivated clients, supposedly its forte. The anti-social personalities with whom cognitive-behavioural therapy should have excelled did as well in the other modalities.

Treatment works

With the matching results a disappointment, the study's sponsors emphasised the overall impact of the treatments, *whoever* the clients.[10] Lack of an untreated comparison group undermined their case, but the improvements were impressive. Again, our focus is on the enduring results after the standalone treatments. Three years later, almost 30% of the former alcoholics had not touched a drop in the preceding three months. The remainder drank on only a third of the days, typically consuming 11 UK units a day compared to 19 before treatment.[11]

Set against these pre–post treatment gains, differences *between* treatments were trivial. Sophisticated computations teased out an apparent advantage for twelve step over cognitive-behavioural therapy: a modest 8% fewer drinking days and two units less when drinking. On these measures, the motivational intervention fell between the other two, so close to both that the differences might have occurred by chance.[12]

As well as scotching expectations of poorer results after the briefer therapy, MATCH furnished the first sound demonstration that the lay wisdom of the twelve steps *can* do as well as clinically developed therapies. The caveat is that the non-twelve step therapists could not encourage AA attendance, itself associated with positive outcomes. Without this restriction the other treatments might have outperformed the twelve step option.

Focusing on improvements in the outpatient arm at three years almost certainly understates the full sample's progress; despite more severe initial problems, after one year 15% more clients in the aftercare arm had achieved abstinence. Allocation to arms of the study was not random, meaning that better outcomes in the aftercare arm cannot be securely attributed to the preceding intensive treatments – but it seems a fair bet that these account for at least part of the effect.

Taking both arms together, at one year (the latest they were both sampled) drinking days had decreased fourfold to under six per month and an average intake of 26 units on a drinking day had dropped to five. Patients also improved in many other areas including depression, alcohol-related problems, drug use, and liver function.

Client's readiness key to change

Even if there seems little to be gained from matching client characteristics to treatments, some characteristics may promote recovery, *whatever* the treatment. Little can be done about a client's age, gender, social status and so on, but other characteristics might potentially be fostered by treatment providers. Again our focus is on the (more UK-relevant) outpatient arm of the study

Topping the list of client characteristics linked to treatment success – and even more important than the initial severity of their alcohol problems – was their *readiness* to change their behaviour, reflecting what the client brings to the process before treatment has begun.[13] Over three years down the line this still had a profound impact on abstinence and restraint when drinking. The importance of this factor is supported by the rapidity of change; practically all the improvement in drinking was evident by the first week of treatment (▸ chart, p. 19).[14]

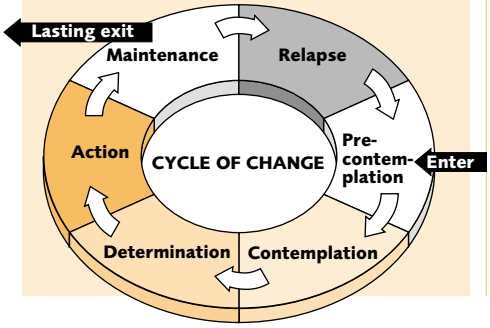
By three years, how pro-drinking the client's social circle had been on intake to treatment no longer made any overall[15] difference to outcomes. Still modestly predictive was how confident the client had felt about tackling their drink problem, an association also found among aftercare clients.

Some severe problem clusters were excluded, but it should still give pause for

Cycling to recovery

Prochaska and DiClemente's cycle of change model is fundamental to much treatment practice here and in the USA. It provides a common language for communicating about clients and a rationale for tailoring treatments to the client's readiness to respond. This description is adapted from MATCH's manual on motivational enhancement therapy (▸ *Doing it the MATCH way: the manuals,* p. 20).

People who are not considering change in their problem behaviour are described as **pre-contemplators**. In the **contemplation** stage individuals begin to acknowledge they have a problem and to consider the feasibility and costs of changing their behaviour. As they progress, they move on to the **determination** stage, where the decision is made to take action and change. Once individuals begin to modify the problem behaviour, they enter the **action** stage, which normally continues for three to six months. After successfully negotiating the action stage, they move to **maintenance** or sustained change. If these efforts fail, a **relapse** occurs and the individual begins another cycle



Core documents

MATCH's major outcomes and implications have been reported in four core papers. These are drawn on throughout the text and usually not specifically referenced.

- Project MATCH Research Group. "Matching alcoholism treatments to client heterogeneity: Project MATCH posttreatment drinking outcomes." *Journal of Studies on Alcohol*: 1997, 58, p. 7–29. One-year outcomes for both arms of the study relating to the most promising of the matching variables.
- Project MATCH Research Group "Project MATCH secondary a priori hypotheses." *Addiction*: 1997, 92 (12), p. 1671–1698. One-year outcomes for both arms of the study relating to an alternative less well established set of matching variables, plus a summary of all one-year results.
- Project MATCH Research Group. "Matching alcoholism treatments to client heterogeneity: Project MATCH three-year drinking outcomes." *Alcoholism: Clinical and Experimental Research*: 1998, 22 (6), p. 1300–1311. Three-year outcomes for the outpatient arm of the study.
- Project MATCH Research Group. "Matching patients with alcohol disorders to treatments: clinical implications from Project MATCH." *Journal of Mental Health*: 1998, 7(6), p. 589–602. Summarises findings and gives the MATCH Group's assessment of their practice implications.

thought that the *worse* their alcohol dependence and social functioning at intake, the *better* outpatients did at three years. The strongest link was between alcohol dependence and abstinence, suggesting that the most dependent tended to cope by not drinking. Turning to the study as a whole (aftercare as well as outpatient), at one year a raft of unpromising symptoms including 'sociopathy' and psychiatric severity as well as dependence and poor social functioning, also had either no impact or inconsistent impacts on outcomes.

Matching therapist to therapy

Though matching clients to treatments seemed relatively unimportant, there was some evidence for another kind of matching – matching *therapists* to treatments. Detailed findings are as yet unpublished, but clues about which therapists operate best within each of the treatments are available from a summary paper[16] and from MATCH researchers' comments last May in Leeds.[17, 18] Though provocative, methodological limitations reduce confidence in the findings. Patients were not randomly allocated to therapists and the study's quality controls probably helped confine the therapist effect to one or two 'outliers' with unusually poor results; outside MATCH, variable therapist competence is likely to exert a greater influence.

In tune with the approach's non-confrontational style, motivational therapists low in aggression and masculinity and high in nurturance did best. In contrast, twelve step therapy benefited from high aggression and low nurturance. Above the relatively high floor set by MATCH, greater educational achievement or experience conferred no further benefits; in twelve step therapy these were *negatively* related to outcome. Even in twelve step therapy it did not matter whether the therapist was a recovering alcoholic. With one exception, gender also was irrelevant; among outpatients, and only in twelve step therapy, women did better with women.

Perhaps these crude categories failed to capture the client-therapist affinities needed to generate emotional bonding and the feeling of a shared enterprise – the 'therapeutic alliance'. For therapists and clients these feelings were tapped via a questionnaire. Among outpatients a firmer alliance (as experienced by either side after their second meeting) was modestly but consistently associated with treatment participation and better outcomes.[19] In turn, entering treatment ready to change led to a better therapeutic alliance.[20]

These findings chime with UK research showing that a therapist's initial "therapeutic commitment" to an alcohol client is strongly related to whether that client engages in treatment. This commitment was experienced by the client as the worker being accepting and warm – not surprising, as liking the client seemed a key component.[21]

Methodological strengths and limitations

Much of MATCH's significance resides in its 'collateral' findings: treatment seemed to exert an impressive impact; the client's readiness for change strongly predicted outcomes;[22] and the bond between therapist and client had a more consistent impact than either the match between treatments and clients, or between broad therapist and client characteristics. But these findings emerged from a study not designed to test them. How much faith can we have in them, and did the design somehow obscure the matching effects it sought?

Matches may have failed to emerge because the study sacrificed *external* in favour of *internal* validity (▶ *Glossary*).[23] Internal validity is the extent to which the design adequately tests predictions about the intervention's impact. The higher it is, the more confidence we can have that the results are not due to something else. But tight design – such as restricting patient intake and therapeutic discretion – risks divorcing a study from the typically more messy world outside. This is the issue of *external* validity – generalisability to other clients and settings.

In the understandable search for internal validity,[24] in at least three ways MATCH may have obscured the effects it sought: client selection; measurement; and treatment. Alternatively, perhaps its search for matches was too crude or misdirected, failing to capture what it is about the interaction between a client and an intervention that leads to change. These are the issues explored below.

Clients: only the best?

The project homed in on alcohol problems, excluding other problems which may have confused the results. Drug users were not excluded but drug dependants[25] and recent injectors were. Also partly or wholly excluded were: the under-18s; the psychotic; the potentially violent; the socially isolated or homeless; and those currently under criminal justice supervision. There were so few highly disturbed outpatients that potential matches might have been missed.

So the study can only afford limited clues about how to handle the most disturbed and violent drinkers and those ordered into treatment by the courts. Since these are UK policy priorities, there is an argument for querying MATCH's relevance (▶ *Violence is the issue*, p. 18). However, nearly half the outpatients were using illicit drugs, half the total sample had a prior psychiatric diagnosis, and half were unemployed. Unless apparent only at the excluded extremes, the range of problems was sufficient for matches to emerge.

> ▶ ▶ ▶ *many criticisms of MATCH's design are guilty of being 'wise after the event'*
>
> Nick Heather

Also excluded were patients who rejected entry into a study which entailed randomised treatment. Matching effects may have failed to emerge partly because clients with strong treatment preferences would have excluded themselves. Two very common matching methods – client preference and therapist intuition/assessment – were not tested.

Measurement: therapeutic in itself?

Repeated test batteries mostly administered face-to-face were essential to the study's design, but it's more than plausible that the therapeutic benefits of eight hours of initial testing and five three-monthly follow-up interviews partially submerged differences in the impacts of the formal treatments.[26] Indeed, patients sometimes confused their research contacts with their therapists.[27]

Treatments: too good, or the same under the skin?

The most frequent 'criticism' of MATCH is that its treatments were *so* good that improvements in clients left no room for matching. This argument was dismissed by the MATCH team and seems misconceived. If a treatment *is* rubbing a client up the wrong way, the greater the fidelity and persistence of its delivery, the worse would be the results.

More convincing is the argument that features shared by the treatments led to similar outcomes. All were 12-week, one-to-one

counselling interventions. At a deeper level, all provided a clear and credible programme for recovery, delivered with stringent quality control and measures to maximise treatment compliance. Compatible with this view is the finding that therapies thought to work through distinct psychological systems actually worked in similar ways. Cognitive-behavioural training did *not* specially improve social skills or psychopathology. Motivational therapy's non-confrontational style did *not* particularly strengthen the client-therapist bond.[28] Such findings have been reported elsewhere.[29]

However, the scope for other approaches to prove more suitable for some clients than for others remains wide. Matching might have been more evident if family therapy, pharmacotherapy, psychodynamic therapies, group approaches, self or mutual help had also been in the frame, or if the MATCH treatments had been varied in intensity. Exclusion of group approaches – the "stock in trade" of alcohol treatment[30] – is seen as particularly unfortunate.

Britain is different

Two factors which might have obscured matching are specially relevant to the UK. First, MATCH therapies were all delivered at hospitals, but UK policy emphasises community settings such as primary care, the probation office, or the local voluntary alcohol service.[31] What works there with the type of clients seen in those settings is not necessarily the same as what works at US hospitals. Secondly, though MATCH's manuals were designed to allow a flexible response to client needs, clients could neither choose their initial drinking goal nor modify it as therapy progressed – it was always abstinence. In the UK, controlled drinking and harm reduction have far greater currency than in the US.

> ▸ ▸ ▸ *perhaps with all mental health work, there is a sense in which 'It's not what you do, it's the way that you do it'*
> Mike Ward

More generally, the research protocol curtailed the leeway for clients to modify their therapeutic programme – a serious restriction when the essence of a therapy is client empowerment, the case for motivational interviewing.[32] MATCH's motivational therapy still did remarkably well, but allowing greater client leeway might have thrown up clearer findings about which clients were best placed to exploit this freedom.

Too thin to match?

Among MATCH researchers a favoured explanation for the lack of matching is that the theories available to be tested were too simplistic. MATCH generally tried to match treatments to uni-dimensional, standard client attributes, but real-world therapists make multi-dimensional assessments combining objective and intuited client attributes. Multi-dimensional (or 'thick') matching might have proved more effective. However, it is doubtful whether current research methods could capture such complexity;[33] adding in combinations of variables and those less susceptible to measurement might threaten the replicability and applicability of the findings.

Looking the wrong way?

The previous section explored the 'technical' reasons why matching may have failed to emerge, explanations which leave MATCH's fundamental assumptions untouched and with them the possibility that a later study would find those elusive matches. But there is a deeper level of doubt over MATCH's approach, one probed by our own and other expert commentators, and by two of the study's experienced therapist-researchers; it relates to MATCH's vision of the nature of addiction.

MATCH coordinator Thomas Babor has characterised its matching tests as based on a "technological, medical model".[34, 35] Underlying most was the assumption that fixed features of the client's personality and initial alcohol problem could be keyed into treatment technologies, much as a key fits a lock and enables change – an opening door. But what if the lock was in a dynamic relationship with its environment, changing shape depending on the colour of the door, the time of day, and the weather? No key could be made consistently to fit – or not until we understood these interactions; is this what happened in MATCH?

The study's focus on psychological deficits[36] internal to the client fits with a concept of dependence as a disease 'inside' the patient. In this vision, the severity of the disease would be a natural predictor of its resistance to treatment. However, this was *not* the case in MATCH nor in a very differently designed major US study of alcoholics followed up eight years after seeking treatment in everyday conditions.[37] In this 'naturalistic' study the impact of treatment was overshadowed by the patients' long-term access to social and community resources. These included AA, but also more significantly the respect, understanding and support experienced from family and friends. Stability of relationships and of employment are also important predictors of successful outcomes.[38] MATCH itself found that, whatever the treatment, participation in AA's anti-drinking social structures was associated with less drinking.

Such results fit an alternative view of 'dependence' as a functional way of relating to one's environment – a vision which redirects attention away from the client's personality and towards the varying difficulties they experience in changing this relationship.[39] By definition, these difficulties lie not *inside* the client but between them and those who affect and are affected by their drinking, relationships which themselves will be embedded in the wider context of that society's social structures.[40]

Treatment or faith?

Returning to (and stretching) the lock (patient) and key (treatment) analogy, what if it all depended on whether the lock was *ready* to be opened, and anything which looked like its idea of a suitable key would spring it? Then no matter what the key's shape, as long as it looked sturdy, polished and above all key-like, it would 'work'.

Violence is the issue

Mike Ward *argues that MATCH is largely beside the point.*

Reading MATCH in the context of community care in the UK in the late 1990s is like looking at yesterday's high-tech gadget – interesting, but things have moved on.

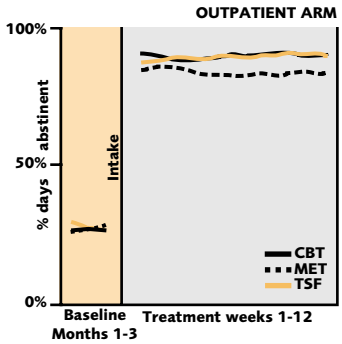
'Social care' incorporates three main elements: change; maintenance; and control or protection. For the last few decades alcohol treatment has concentrated on the first: which treatment is most likely to foster change? MATCH was born of that focus. But today's debate about mental health and community care is driven by fear of violence by people discharged from mental health services. The pressure is on simply to control people, and alcohol and drug services are not exempt.

In top policy making circles substance misuse is now recognised as central to the perceived 'failure of community care'. The Director of the Centre for Mental Health Service Development recently argued that to improve mental health services, "The first thing is to tackle the link between substance misuse and mental health".[67]

Why this concern? Substance misuse may have been the real cause of most recent homicides committed by the mentally ill in the UK.[68] Similarly, a US study of recently discharged mental patients found "co-occurring substance abuse disorder to be a key factor in violence".[69]

The new challenge for substance misuse services is how to control people and protect society. Of course, effective treatment protects society from substance-related crime – but only among those presenting for treatment. For the dually diagnosed, the major need is to work with those who *don't* volunteer for treatment. Arguably, which treatments work best for 'volunteer' clients is now less important than developing strategies to address these concerns.

by Mike Ward ▸ *Acknowledgments*



Rapid and dramatic reduction in drinking in the first week of treatment cast doubt on whether treatment was the active ingredient in change.
Source ▶ reference 14

Is this why the MATCH treatments – competently delivered and meeting US cultural expectations of what 'therapy' should look like – indiscriminately evinced such rapid and dramatic results, well before treatment would 'bite'? For the most successful clients, what *was* there from the start – and it was the best predictor of outcomes – was readiness to change.

Ruminating on these phenomena took two of MATCH's respected researchers very far from the project's implicit view of treatment as a technical fix to a medical or psychological disorder.[41] William Miller and Thomas Babor argued that the active ingredient was the *client's* decision to put their life in order and the resources available to them to do this. Miller believed treatment merely gave people 'permission to recover' and provided some of those resources. Babor speculated that offering any culturally accepted route to recovery might work the same magic as 'treatment' or 'therapy' in Western societies. In some cultures, faith healers and witch doctors also give 'clients' the belief that they can get better and the confidence to go ahead and do it – effectively, do it themselves.

Supporting such views, a recent study reported substantially better psychological functioning when clients seeking treatment were in the action as opposed to the contemplation phase of the cycle of change, all before treatment had started.[42] In many studies – MATCH is one – such differences might wrongly have been attributed to treatment. Another study found that pharmacological supports to abstinence were overshadowed by the client's initial readiness to take action over their alcohol problem.[43] The centrality of readiness to change would also explain why no matching effects duplicated across MATCH's aftercare and outpatient arms; these populations (one mainly abstinent, the other trying to be) were at different stages of change so different factors were important.

Practice implications

Much of MATCH's significance, prompted by what it did *not* find and by its 'collateral' findings, might lie in its longer-term contribution to understanding addiction. Emerging from MATCH ought to be a research programme designed, as MATCH was not, to probe these more fundamental issues. But what of the here and now?

Matching (of this kind) unimportant

After their one-year results MATCH authors were confident only of the near futility of matching their treatments to the client attributes they tested. Later (with the largest match yet found emerging at three years) they were more upbeat. Despite their modest size, "the matches ... are reasonable considerations ... to take into account when planning a treatment program" if the therapies are "delivered with fidelity by trained therapists".

> ▶ ▶ ▶ *its key failing was to assume there was something* ***different*** *about substance misusers to which a magic treatment could be matched*
>
> Bob Purser

Among the matches most relevant to UK practice was the finding that motivational therapy coped best with **highly angry** clients; its non-confrontational style may be less likely to ignite short fuses. Also relevant is the fact that in the long term clients immersed in **pro-drinking social networks** did best in the therapy which focused on encouraging participation in anti-drinking networks. Especially where these are lacking, building social networks supportive of the client and of their drinking goals may be an important buffer against relapse.[44] In MATCH this was achieved via AA; in the UK, other networks might be acceptable to a broader range of clients.

Twelve step therapy seemed to have particular affinity for those highly **dependent on alcohol**, but again the findings were inconsistent and ambiguous. Without prior intensive treatment, interventions based on cognitive or motivational approaches worked just as well.

For the UK, arguably the least pertinent match involved **psychiatric severity**. There was some evidence that relatively problem-free clients did better after twelve step therapy – but only in the short-term and with respect to abstinence rather than controlled drinking. Given twelve step's dominance in the USA and the greater salience of controlled drinking in the UK, the transportability of this tentative finding must be open to question.

MATCH's 'failure' (if that's what it was) to find compelling matches was one with the distinctly positive implication that, within the study's limits in terms of clients, treatments and attributes tested, treatment providers need not bother too much about triaging new patients and can get on with treating them.

Treatment works ...

Or, more accurately, MATCH suggested it *can* work *very* well when provided on an individual basis using motivational interviewing, cognitive-behavioural or twelve step approaches delivered with thorough therapist screening and training, stringent quality control and persistent anti-drop out measures. 'Anything goes' is certainly not the MATCH message.[45]

Moreover, within wide (but not extreme) limits, these treatments work almost regardless of the initial severity of the client's alcohol, social or psychological problems. Such approaches can consider themselves vindicated for a substantial range of problem drinkers and should be available within a district's mainstream alcohol services.

... but this cannot be assumed

Perhaps the most salutary lesson to take from MATCH is its clear demonstration of the danger of untested assumptions. The only way to be sure that current treatments or innovations actually do deliver results is to monitor the bottom-line – outcomes[46] – and the treatment processes that lead up to them. Drop out rates pre and post assessment, during treatment, and in aftercare, can pinpoint where clients are lost to the process. Investigation of why this is happening should lead to the testing of remedial measures, such as those documented in MATCH manuals.

Even some small UK alcohol agencies also manage to assess longer term outcomes. The jolt of high relapse rates may be unpleasant, but should spur improvements. Commissioners could be made aware if these improvements translate into cost savings down the line. They are likely to be especially impressed if (as will often be the case) savings accrue to the services for which their authority also foots the bill (reduced hospital admissions, GP visits, prescriptions etc).

Make motivational therapy the starting point

One of MATCH's most important findings was that motivational therapy was at least as suitable for heavier and more vulnerable

Acknowledgments

We are grateful to Griffith Edwards, editor of *Addiction*, for permission to draw on an a draft paper summarising the findings of Project MATCH and to MATCH's Thomas Babor for forwarding that and other papers.

This report draws on the views of several experts, each of whom was asked to focus on a particular aspect but were also invited to comment more broadly. Though they have enriched it, they bear no responsibility for the final text. FINDINGS thanks the following for generously giving its readers the benefit of their experience and expertise.

Methodological strengths and limitations ▶ Professor Nick Heather, Director, Centre for Alcohol and Drug Studies, Newcastle City Health NHS Trust; Principal Investigator (Research Coordination), UK Alcohol Treatment Trial (UKATT).

Practice implications ▶ Bob Purser, Director, Aquarius, Birmingham. Aquarius is a multi-site community-based alcohol agency which bases its practice on evaluations of alternative programmes. Barbara Elliott, then Director of ACCEPT Services. ACCEPT is a day centre in London offering abstinence and controlled drinking service. Mike Ward, Purchasing Manager (Alcohol & Drugs), Surrey County Council. Mike has extensive experience managing drug and alcohol services and recently investigated the relationship between substance use, homicide and mental illness.

Comments on the first draft ▶ Thomas Babor, Allan Zweben and other members of the Project MATCH Research Group. Barbara Elliott. Nick Heather. Bob Purser. Libby Ranzetta, Services Officer, Greater London Alcohol Advisory Service (GLAAS). The FINDINGS Editorial Board.

drinkers as the two more intensive therapies. *Within the limits of problem severity tapped by MATCH*, motivational interviewing seems a safe and cost-effective starting point[47] for one-to-one professional outpatient therapy. It may be less suitable if rapid in-treatment reduction in drinking is important, but even this finding could be an artifact of MATCH's four sessions being strung out over 12 weeks.

This conclusion cannot (yet) be applied to the homeless, isolated, illiterate, psychotic, violent, suicidal, criminally involved, drug dependent or young drinkers partly or wholly excluded by MATCH. Since these are among the UK's treatment priorities, it would be folly to dismantle more intensive treatments without a similarly rigorous test of brief therapies for at least these populations. All the more so since MATCH's 'aftercare' clients started off worse but in the end fared significantly better than those without the benefit of prior intensive treatment.[48]

Mutual aid prevents relapse

One interpretation of MATCH is that AA proved itself at least as good as professional therapies; dismantle the treatment industry and give the money to mutual aid groups was the controversial implication some drew from the study.[49] MATCH countered that its therapy was *not* AA but a professional (and expensive) programme intended to foster AA participation: "A conclusion that AA attendance can simply be *substituted* for treatment is therefore unwarranted".[50]

> ▶ ▶ ▶ *MATCH will increase the pressure to ask more questions about what helps people and what does not*
>
> Barbara Elliott

But could AA-type volunteers have done just as well as MATCH's twelve-step therapists? We know that ex-alcoholic therapists did as well as those without a history of alcoholism and that, above the relatively high floor set by MATCH, experience and education, and the accepted attributes of a good therapist, seemed if anything a hindrance to encouraging twelve step participation. Whatever the treatment, such participation was associated with better results. Together these findings suggest that committed (but trained and monitored) volunteers could protect a service's investment in mainstream therapy by promoting engagement in mutual aid networks. Agencies which fail to take out this insurance risk seeing the benefits of their primary treatment rapidly negated.

Quality counts

MATCH clients were engaged with selected, trained therapists in clear, well structured, quality-controlled programmes from which neither was allowed easily to drift. No definitive statements can be made on the impact of these measures – MATCH was designed to eliminate rather than test variability in quality – but 'quality counts' is widely seen as the project's key lesson,[51, 52] particularly as US alcoholism treatment generally under-performs compared to MATCH.[53]

To this issue MATCH and its sponsors devote most space in their assessment of the project's practice implications; matching is relegated to single paragraph.[54] The implication is that service commissioners need to concentrate not so much on purchasing specific therapies, as on purchasing and encouraging quality staff inputs. MATCH itself spotlighted therapist training, manual-guided therapy and measures to encourage client compliance as the key quality variables; each is dealt with below under its own heading. Such strategies are not unknown to UK agencies,[55] but the MATCH $millions and its internationally respected collaborators brought them to unprecedented heights.

Therapists as important as treatment

MATCH's therapists were qualified, experienced in and committed to the relevant therapy, trained over three days, sifted through two videotaped test clients, supervised weekly by staff of leading US centres, and monitored by random videotaping to correct therapeutic drift. Commending such procedures, the MATCH team suggest that "therapist preparation [may be] at least as important a factor as treatment modality".[56]

One objective of therapist selection and training is to maximise the ability to forge a therapeutic alliance with clients. MATCH confirmed that this bond consistently contributed to good outcomes. Matching the therapist's personal attributes (empathy, aggression, etc) to the type of treatment also leads to better results. For the core motivational approaches, non-judgemental, warm and empathic individuals, committed to the therapy and to the clients, are likely to achieve the best outcomes.

The best therapists will probably be able to switch emotional tone depending on the therapy and the client's readiness to change. The best services will be as thorough as MATCH in screening who will treat their clients and in ensuring they stay on song.

Structure and codify the treatment

Clear, credible programmes offering a culturally appropriate route out of alcohol problems, persuasively communicated by committed therapists, may provide the initial impetus to successful treatment. All this is easier to achieve on the basis of a well structured manual. MATCH's manuals provided the focus for training and the yardstick against which to monitor therapeutic drift. They also codified the therapy's rationale and structure and mandated therapists to communicate these to clients at the first session. Clients will also have gathered that they were being enrolled in a prestigious study testing 'gold standard' treatments.[57, 58]

Doing it the MATCH way: the manuals

▶ Twelve step facilitation therapy manual: a clinical research guide for therapists treating individuals with alcohol abuse and dependence. Nowinski J., Baker S., Carroll K. Project MATCH Monograph Series, Volume 1. 1995.

▶ Motivational enhancement therapy manual: a clinical research guide for therapists treating individuals with alcohol abuse and dependence. Miller W.R., Zweben A., DiClemente C. *et al.* Project MATCH Monograph Series, Volume 2. 1995.

▶ Cognitive-behavioral coping skills therapy manual: a clinical research guide for therapists treating individuals with alcohol abuse and dependence. Kadden R., Carroll K., Donovan D., *et al.* Project MATCH Monograph Series, Volume 3. 1995.

▶ Improving compliance with alcoholism treatment. Carroll K. *ed.* Project MATCH Monograph Series, Volume 6. 1997.

Published by the US Department of Health and Human Services and available from: Distribution Center, National Institute on Alcohol Abuse and Alcoholism, PO Box 10686, Rockville, Maryland 20849-0686, USA.
Fax 00 1 202 842 0418 ● http://www.niaaa.nih.gov

If Babor and Miller's suspicions are correct (▶ *Treatment or faith?* above), these messages will have powerfully communicated the 'permission to recover' which gave clients the confidence to action their readiness to change, leading to rapid improvements on treatment entry. What MATCH did other services can aspire to, building on the head start given by the project's manuals.

Make it hard to stay away

What was it that kept MATCH clients coming back for on average 70%[59] of their scheduled sessions? MATCH's unusually low drop-out and high client compliance were minimally related to the severity of the client's problems. There is no justification here for focusing on the least damaged referrals on the grounds that they are most likely to benefit from treatment. Rather, MATCH's philosophy (supported by its findings[60]) is to see compliance not as a feature of the client, but as emerging from the partnership between client and treatment.[61]

Several of MATCH's compliance strategies amount to fostering this sense of partnership. Among them are the cost-less virtues of a pleasant and respectful atmosphere, clear communication of staff and client roles and responsibilities, communicating empathy and concern for the individual's welfare, and pride of participation – in MATCH's

case, in a national study;[62] elsewhere, perhaps the feeling that the client is integral to a venture of which they as well the staff can feel proud.

Other anti-drop out measures did require resourcing: overcoming practical barriers to attendance (eg, childcare, transportation); appointment reminders; and rapid response to missed sessions through letters and telephone calls. MATCH was not designed to test such measures, but another study has reported dramatic improvements in client retention from modest but systematic efforts along these lines. By reducing re-admission rates, such measures could more than pay for themselves.[63, 64] Helpfully, MATCH has codified its tactics in yet another manual (▶ *Doing it the MATCH way: the manuals*).

Postscript: is virtue out of date?

MATCH is a multi-million dollar project of a scale few will see in a lifetime. Its results too are 'multi' – multiple, multi-layered, multi-faceted. But the bottom lines seem taken from a how-to-live-your-life manual of the old school. Be thorough; there is no substitute for quality; judge not; be welcoming and warm, but be persistent; like people and they will like you; cooperation gets the job done; help yourself by helping others; know what you should be doing, do it, and do it well; explain clearly what you are up to and why; have and give confidence that together you can make things better; assume nothing. Perhaps above all – timing: catch people at the cusp of change, or somehow get them there, and the rest of the journey may be bumpy and long, but it will be downhill.

There is, though, the nagging feeling, here and in the USA, that such old-fashioned virtues are giving way to others characterised by cost-driven cuts, short-termism, and societal self-defence from deviant minorities.[65] In so far as this process has advanced less far in Britain than in the USA (where it has been driven by medical insurance companies), MATCH may have greater impact here than in its homeland.[66]

---

1 Drummond D.C. "Treatment research in the wake of Project MATCH." *Addiction*: 1999, 94(1), p. 39–42.

2 Glaser F.B. "The unsinkable Project MATCH." *Addiction*: 1999, 94(1), p. 34–36.

3 Glaser F.B., op cit.

4 Schuckit M.A. "Editor's corner: it ain't necessarily so." *Journal of Studies on Alcohol*: 1997, 58, p. 5–7.

5 Project MATCH Research Group. "Summary of Project MATCH." *Addiction*: 1999, 94(1), p. 31–34.

6 Edwards G., Marshall E.J., Cook C.C.H. *The treatment of drinking problems: a guide for helping professions.* 3rd edition. Cambridge University Press, 1997.

7 Monti P., Abrams D., Kadden R., *et al. Treating alcohol dependence: a coping skills training guide*. New York: Guilford Press, 1989.

8 Miller W.R., Rollnick S. *Motivational interviewing*. New York: Guilford Press, 1989.

9 One other outpatient match faded into insignificance within nine months of treatment ending. Up to then clients relatively free of psychological problems drank on fewer days after twelve step than after cognitive-behavioural therapy.

10 NIAAA press release, 17 December, 1996, quoting Dr Fuller of the NIAAA: "These findings are good news for treatment providers and for patients who can have confidence that any one of these treatments, if well-delivered, represents the state of the art in behavioral treatments."

11 Derived from the median drinks per drinking day figures in: Project MATCH Research Group. "Matching alcoholism treatments to client heterogeneity: Project MATCH three-year drinking outcomes." *Alcoholism: Clinical and Experimental Research*: 1998, 22(6), p. 1300–1311.

12 Motivational therapy scored between the other two but was not *significantly* worse than twelve step therapy nor better than cognitive behavioural. However, *total* abstinence in the preceding three months was more common among twelve step clients (36% v. 24% and 27%).

13 No such association was seen (at one year) in aftercare clients, presumably because most had already 'made the change' to abstinence.

14 Project MATCH Research Group. "Matching alcoholism treatments to client heterogeneity: treatment main effects and matching effects on drinking during treatment." *Journal of Studies on Alcohol*: 1998, 59, p. 631–639.

15 As opposed to the matching effect noted earlier (twelve step therapy especially benefiting those with pro-drinking social circles).

16 Project MATCH Research Group. "Matching patients with alcohol disorders to treatments: clinical implications from Project MATCH." *Journal of Mental Health*: 1998, 7(6), p. 589–602.

17 *Meet the MATCH makers conference*. Organised by Leeds Addiction Unit and Society for the Study of Addiction, 14–15 May 1998, Leeds. The current author attended and took notes which are drawn on in the following account.

18 Ranzetta L. *The findings of Project MATCH. Report of a conference held on 14–15 May 1998, Leeds.* Greater London Association of Alcohol Service, 1998.

19 Connors G.J., Carroll K.M., DiClemente C.C., *et al*. "The therapeutic alliance and its relationship to alcoholism treatment participation and outcome." *Journal of Consulting and Clinical Psychology*: 1997, 65(4), p. 588–598. Comments that almost certainly the 'alliance' effect was artificially constrained by the study's design and data analysis.

20 Ranzetta L., op cit.

21 Cartwright A., Hyams G., Spratley T. "Is the interviewer's therapeutic commitment an important factor in determining whether alcoholic clients engage in treatment?" *Addiction Research*: 1996, 4(3), p. 215–230.

22 Outpatients only.

23 Heather N. "Some common methodological criticisms of Project MATCH: are they justified?" *Addiction*: 1999, 94(1), p. 36–39.

24 Given the optimism over matching in the '80s, it was essential to design a trial that would provide as unambiguous answers as possible regarding the effectiveness of client-treatment matching. Previous research had been inconclusive largely because such safeguards had not been taken; it was important not to repeat these faults. The investigators would rightly have attracted criticism if this expensive study had not allowed unequivocal conclusions to be drawn.

25 Except cannabis and tobacco.

26 For example, by forcing clients to reflect on their problems, their progress in overcoming them, and providing at least a not unsympathetic ear.

27 *Meet the MATCH makers conference*, op cit.

28 Richard Longabaugh speaking at *Meet the MATCH makers conference,* op cit.

29 Finney J.W., Noyes C.A., Coutts A.I., *et al*. "Evaluating substance abuse treatment process models: I. Changes on proximal outcome variables during 12-step and cognitive-behavioral treatment." *Journal of Studies in Alcohol*: 1998, 59, p. 371–380.

30 Glaser F.B., op cit.

31 Department of Health and Social Security. *Pattern and range of services for problem drinkers*. 1979.

32 Miller W.R. "Motivational Interviewing with problem drinkers." *Behavioural Psychotherapy*: 1983, p. 147–172.

33 Finney J.W. "Some treatment implications of Project MATCH." *Addiction*: 1999, 94(1), p. 42–45.

34 *Meet the MATCH makers conference*, op cit.

35 Orford J. "Future research directions: a commentary on Project MATCH." *Addiction*: 1999, 94(1), p. 62–66.

36 Orford J., op cit, in which the author refers to Thomas Babor characterising the MATCH model as based on "the correction of individual client 'liabilities'" ('liabilities' is the only direct quote).

37 Humphreys K., Moos R.H., Cohen C. "Social and community resources and long-term recovery from treated and untreated alcoholism." *Journal of Studies on Alcohol*: 1997, 58, p. 231–238

38 Costello R.M. "Alcoholism treatment effectiveness: slicing the outcome variance pie." In: Edwards G., Grant M. *eds. Alcoholism treatment in transition.* Croom Helm, 1980.

39 Orford J., op cit.

40 Lindström L. "Life is short, the Art long." *Addiction*: 1999, 94(1), p. 45–47.

41 Miller W., Babor T. *Meet the MATCH makers conference,* op cit.

42 Hile M.G., Adkins R.E. "The impact of substance abusers' readiness to change on psychological and behavioral functioning." *Addictive Behaviors*: 1998, 23(3), p. 365–370.

43 Hernandez-Avila C.A., Burleson J.A., Kranzler H.R. "Stage of change as a predictor of abstinence among alcohol-dependent subjects in pharmacotherapy trials." *Substance Abuse*: 1998, 19(2), p. 81–91. Data were derived from a placebo trial of the antidepressant fluoxetine (Prozac) and the tranquilliser buspirone.

44 Humphreys K., op cit.

45 Orford J., op cit.

46 Glaser F.B., op cit.

47 Cisler R., Holder H., Longabaugh R., *et al*. "Actual and estimated replication costs for alcohol treatment modalities: case study from Project MATCH." *Journal of Studies on Alcohol*: 1998, 59, p. 503–512.

48 Gordis E., Fuller R. "Project MATCH." *Addiction*: 1999, 94(1), p. 57–59.

49 Schaler J.A. "Selling water by the river: the Project MATCH cover-up." *Psychnews International*: 1996, 1 (5).

50 Project MATCH Research Group. *Journal of Mental Health*, op cit.

51 NIAAA press release, 17 December, 1996.

52 Alcohol Concern. "Project MATCH – what treatments for what clients." *Acquire*: summer 1997, p. 1–3.

53 Dawson D.A. "Correlates of past-year status among treated and untreated persons with former alcohol dependence: United States, 1992." *Alcoholism: Clinical and Experimental Research*: 1996, 20(4), p. 771–779. Within five years of being treated for alcohol dependence, 70% of former patients had been dependent or had abused alcohol in the past year and 11% were abstinent.

54 Project MATCH Research Group. *Journal of Mental Health*, op cit.

55 An example is Aquarius's counsellor training, assessment and supervision programme based on its own and Alcohol Concern's manuals.

56 Project MATCH Research Group. *Journal of Mental Health*, op cit.

57 Zweben A., Barrett D, Carty K. eds. *Strategies for facilitating protocol compliance in alcoholism treatment research*. Project MATCH Monograph Series 7. NIAAA, 1998.

58 Mattson M.E., Del Boca F.K. "Compliance with treatment and follow-up protocols in Project MATCH: predictors and relationship to outcome." *Alcoholism: Clinical and Experimental Research*: 1998, 22(6), p. 1328–1339.

59 Allen Zweben, personal communication, 1999, referring to both the aftercare and outpatient arms of the trial. The author adds that "The breakdown is as follow: MET 0.80, CBT 0.68, and TSF 0.63".

60 Connors G.J. *et al*, op cit, p. 592. In the outpatient arm of the study therapeutic alliance was positively related to client attendance.

61 Zweben A., *et al*, 1998, op cit, p. 11–12.

62 Mattson M.E. *et al*, op cit, p. 1337.

63 Lash S.J., Blosser S.L. "Increasing adherence to substance abuse aftercare group therapy." *Journal of Substance Abuse Treatment*: 1999, 16(1), p. 55–60.

64 Mattson M.E. *et al*, op cit, p. 1336.

65 Frances R.J., Miller S.I., *eds. Clinical textbook of addictive disorders.* Guilford Press, 1998. See especially the editors' preface and Alterman *et al*'s assessment of the state of US substance abuse treatment in chapter 19.

66 Glaser F.B., op cit.

67 Edward Peck quoted in *Community Care*: 9 July 1998, p.10.

68 Ward M., Applin C. *The unlearned lesson – the role of alcohol and drug misuse in inquiries into homicides by mentally ill people.* 1998.

69 Steadman H.J., Mulvey E.P., Monahan J., *et al.* "Violence by people discharged from acute psychiatric inpatient facilities and by others in the same neighborhoods." *Archives of General Psychiatry*: 1998, 55, p. 393–401.