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Aftercare following intensive treatment for alcohol dependence

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Declarations

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- aftercare for adults who are discharged after an intensive treatment for alcohol dependence. We try developing an evidence-based aftercare program from the principles of continuing care and viewing alcohol dependence as a chronic disease. We also develop quality indicators for aftercare.
  It would be good if you could cover the following aspects in your seminar
  - how does aftercare for alcohol dependence look like in the UK
  - how is it organised within the health care setting
  - how do you evaluate / follow-up the results of aftercare
  - what are the bottlenecks with respect to aftercare

Lenaerts *et al*. Systematic review: continuing care *Drug Alc Dep* 2014,*135 9– 21:*

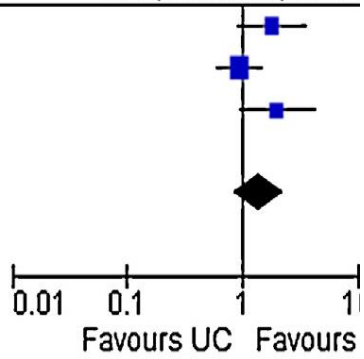
20 studies eligible for qualitative analysis; 6 studies for pooled analysis

a. Percent patients abstinent

Study or Subgroup	Events	Total	Events	Total	Weight	M-H, Random, 95% CI
Bennet 2005	18	58	10	58	29.9%	1.80 [0.91, 3.56]
Fitzgerald 1985	26	123	37	165	43.2%	0.94 [0.60, 1.47]
Pelc 2005	16	50	8	50	26.8%	2.00 [0.94, 4.25]
Total (95% CI)		**231**		**273**	**100.0%**	**1.40 [0.84, 2.33]**
Total events	60		55			

Heterogeneity: $Tau^2 = 0.11$; $Chi^2 = 4.14$, df = 2 (P = 0.13); $I^2 = 52\%$

Test for overall effect: Z = 1.29 (P = 0.20)

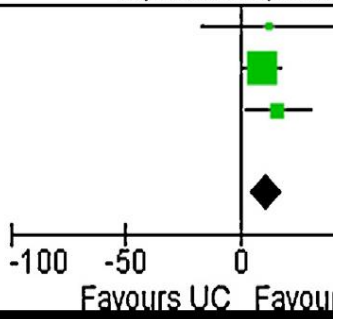


B. Percent days abstinent

	Active intervention (AI)			Usual continuing care(UC)				Mean Difference
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI
O'Farrell 1985, 1992	79.07	30.44	10	66.41	39.98	12	5.8%	12.66 [-16.80, 42.12]
O'Farrell 1985, 1992	99.4	1.37	10	90.57	15.01	12	68.5%	8.83 [0.30, 17.36]
Pelc 2005	55	37	50	39	34	50	25.7%	16.00 [2.07, 29.93]
Total (95% CI)			**70**			**74**	**100.0%**	**10.90 [3.83, 17.96]**

Heterogeneity: $Tau^2 = 0.00$; $Chi^2 = 0.75$, df = 2 (P = 0.69); $I^2 = 0\%$

Test for overall effect: Z = 3.02 (P = 0.003)



Evelien Lenaerts, Bert Aertgeerts and colleagues
Systematic review of continuing care in alcoholism *Drug Alc Dep* 2014*,135 9– 21:*
20 studies eligible for qualitative analysis; 6 studies for pooled analysis

"……a trend of better outcomes in favor of continuing care interventions actively involving the patient, compared to 'usual care.'

The lack of convincing evidence in continuing care research should not discourage clinicians or researchers.

Considering the severe consequences of this disorder, even small improvements in outcomes can be important for the individual patient and for society"

Haug S

Text Message-Based Aftercare Treatment Programme Among Alcohol Outpatients.

Alc Alcohol. (2015) 50 (2): 188-194

three Swiss outpatient alcohol treatment centres

interactive aftercare intervention

monitoring of self-selected drinking goals at regular intervals,

motivational text messages to stick to self-selected drinking goals

proactive telephone calls from counsellors when participants neglected to stick to their drinking goals or expressed a need for support.

Randomly assigned to 6-month aftercare programme with text messages and personal phone calls. (n = 25) or treatment as usual (n = 25).

Follow-up interviews were conducted 6 months after randomization.

RESULTS:

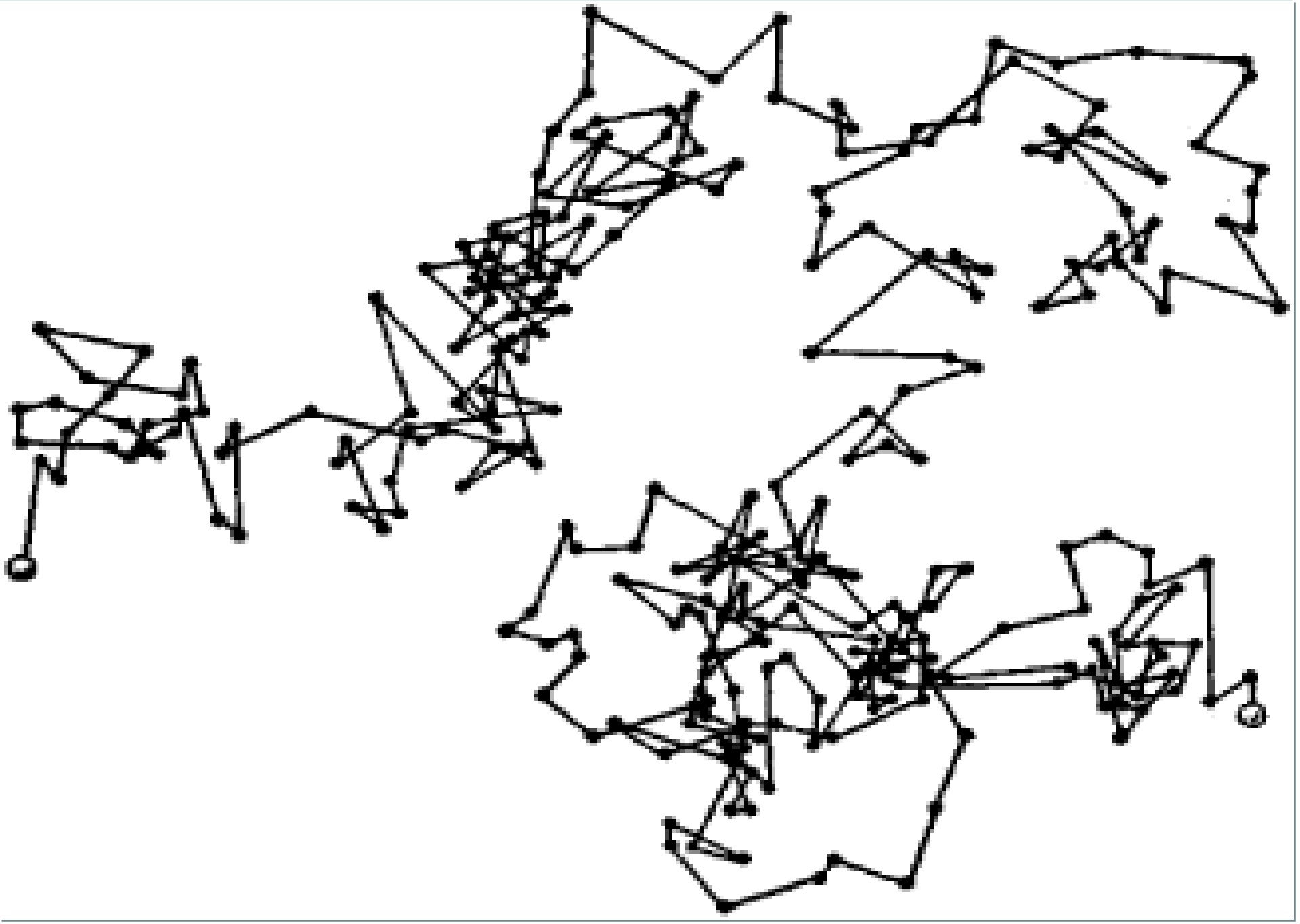
421 text message prompts. Out of these, participants provided valid replies to 371 (88.1%) within 48 h. Out of the 25 participants in the intervention group, 11 (44.0%) sent at least one call-for-help reply.

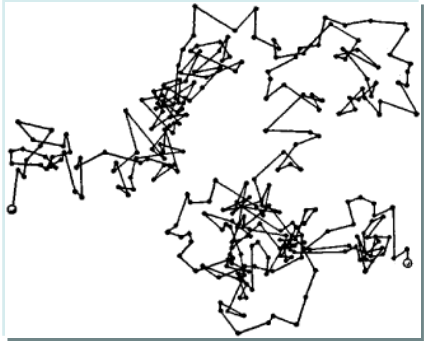
at risk alcohol use at follow-up

41.7% in the control group

28.6% in the intervention group (OR = 0.56, 95% CI = 0.16-1.95, P = 0.36).

After care in the UK today





After care in the UK today

- Little intensive in-patient treatment; emphasis on community detox; limited funds for residential care
- Mostly ‘cbt-based relapse prevention’: identifying triggers, challenging negative thinking; stress management; anger management; (includes groups)
- Not exclusively abstinence-oriented
- Mistakenly sometimes time-limited, not recognising chronic relapsing nature of illness
- Varying levels of training and experience
- Sometimes inadequate use of mutual aid

Gilburt et al, (2015) Navigating the alcohol treatment pathway: a qualitative study from the service users' perspective
Alc Alcoholism, 2015 in press

"Current alcohol care pathways require significant levels of motivation and self-efficacy to navigate, that few patients possess. Pathways need to better reflect the capacity and capabilities of patients to be successful in supporting recovery."

Where is there evidence?

- Integrated care pathways
- Managed care
- Pelc et al dedicated nurse follow-up
- Half-way house; ‘safe house’
- Pharmacotherapy
- Marital therapy with Antabuse

General Principles for effective aftercare

Keep focus

Maximise incentives

Social Network Support

Objective Monitoring

General Principles: 1
KEEP FOCUS

Therapist and patients: Do not be distracted by ‘co-morbidity’ e.g. ‘depression’

But assist with practical issues e.g. debt management; child care; housing; job/training, as in *“Integrated care pathways”; “Managed care”*

General principles: 2
MAXIMISE INCENTIVES

Legal incentives (e.g. deferred sentence) Hayhurst et al 2015 Health Technol Assess.19:1-168. doi: 10.3310/hta19060.
"**The effectiveness and cost-effectiveness of diversion and aftercare programmes for offenders using class A drugs: a systematic review and economic evaluation"**

Professional and employment incentives (n.b. Supervision)

?Relationships incentives (n.b. clear communication)

General Principles: 3
NETWORK SUPPORT

Types of Network Support

Family – involve the family in after care

‘Buddy’ support

Dry living environment

Mutual aid societies

The value of 'safe houses' for Ex-Offenders with substance use disorder . Jason et al 2015, *J Drug Issues ,* 45: 53-68

270 released from criminal justice system

Random allocation to:

- Therapeutic Community (TC),
- or recovery homes called Oxford Houses (OHs),
- or usual care settings (UA) = staying with friends or family members, their own house or apartment, homeless shelters, or other settings.

OHs and TCs : residential; emphasize socialization and abstinence

TCs more professional 'therapy'

UA involved what occurred naturally after completing treatment.

RESULTS

Longer lengths of stay in either the TCs or OHs : increased employment, and reduced alcohol and drug use.

OH condition received more money from employment, worked more days, achieved higher continuous alcohol sobriety rates, and had more favorable cost-benefit ratios.

Self-efficacy and social networks after treatment for alcohol or drug dependence and major depression.

Worley et al 2014, Psychol Addict Behav 28:1220-9.

Veterans (N = 201) : alcohol or drug dependence plus major depression

1 year of post-treatment follow-up.

More structured environmental settings appear to alleviate risk associated with social network substance use, and may be especially advised for those who have greater difficulty altering social networks during outpatient treatment

General Principles: 4 OBJECTIVE MONITORING

Monitoring of BAC (breath alcohol), EtG (urine ethyl glucuronide) or serum CDT (% carbohydrate deficient transferrin) can detect early signs of lapse before drop out from treatment

Mitchell C, Simpson D, Chick J (1997) Carbohydrate deficient transferrin in detecting relapse in alcohol dependence *Drug and Alcohol Dependence* **48** 97-103

n.b. physicians' treatment programmes

Maximising effect of pharmacotherapy

Pelc *et al* (2005) – dedicated specialist nurse improved outcome on acamprosate

Project COMBINE (n=1383)

'Medical management' + naltrexone

> CBT

> Naltrexone + CBT

> Ntx + acamprosate

(Anton et al *JAMA,* 2006, **295,** 2003-17; Oslin et al 2008 *Alc Clin Exp Res*. 32:1299-308)

***enhancing concordance (compliance) is always important in pharmaco-therapy*!**

Good evidence with disulfiram:

In **family and couple therapy.** O'Farrell 1998 *J Stud Alcohol* 59: 357-70.

In the **community reinforcement approach** (Systematic review) Roozen et al 2006

www.crd.york.ac.uk/CRDWeb/ShowRecord.asp?View=Full&ID=12004009561

Disulfiram

When supervised, reduces overall consumption (n.b. trials cannot be double blind)

German open study,7 yr follow up: group support + supervised disulfiram in first year (and longer for some who requested it)
=>50 % abstinent for 7 years! Krampe et al 2006 *Alcoholism: Clinical and Experimental Research*, **30**, 86-95

Safe in liver disease?

HCV infection : Continued drinking appears much more liver toxic than disulfiram in this group. Kulig CC, Beresford TP. *J Addict Dis.* 2005;24:77-89.

Public Health England
Facilitating Access to Mutual Aid

http://www.nta.nhs.uk/uploads/mutualaid-fama.pdf

1. Worker introduces the topic of self-help meetings into their sessions with service users and actively promotes the value of attendance.
2. Worker arranges for service user to get in touch with a current self-help member with the purpose of accompanying them to a meeting.
3. Worker assesses attendance, issues of engagement and takes an active interest in the service user's experience in the groups.

Cochrane 2008 Amato et al

- No experimental studies unequivocally demonstrated the effectiveness of AA or TSF approaches for reducing alcohol dependence or problems. One large study focused on the prognostic factors associated with interventions that were assumed to be successful rather than on the effectiveness of interventions themselves, so more efficacy studies are needed.

Evidence for AA (1)

True randomised controlled study impossible, but:

- Many follow-up studies show that stable recovery is associated with regular attendance at AA / NA

Enhanced friendship networks and active coping mediate the effect of self-help groups on substance abuse

- 2,337 male veterans treated for substance abuse
- The majority of participants became involved in self-help groups after inpatient treatment
- group involvement predicted reduced substance use at 1-year follow-up
- enhanced friendship networks and increased active coping responses appeared to mediate these effects

Humphreys et al . 1999 *Ann Behav Med* **21**:54-60

Attendance at Alcoholics Anonymous meetings after inpatient treatment is related to better outcomes; a 6-month follow-up study.

150 patients in an inpatient alcohol treatment programme

80% follow-up

RESULTS:

Those who attended AA on a weekly or more frequent basis after treatment reported greater reductions in alcohol consumption and more abstinent days. This relationship was sustained after controlling for potential confounding variables.

Gossop et al (2003) 6-month follow-up after in-patient treatment for alcoholism *ALCOHOL & ALCOHOLISM 38:421-6.*

Correlates of Recovery from Alcohol Dependence: A Prospective Study Over a 3-Year Follow-Up Interval

Dawson et al.

Alc Clin Exp Res: 2012; 36:1268-77.

Wave 1: Alcohol dependence **(*n* = 1,172)**

Wave 2: Abstinent recovery significantly associated with Black/Asian/Hispanic race/ethnicity, children <1 year of age in the household at baseline, attending religious services greater than or equal to weekly at follow-up, and **having initiated help-seeking that comprised/included 12-step participation** within <3 years prior to baseline.

Evidence for AA (2)

RCTs of ‘Facilitation’ by healthcare professionals

Project MATCH -design

Out-patients N=952

Aftercare following in-patient stay N=774

Random allocation to either:

12 sessions cognitive behavioral therapy- ***CBT***

or *12 sessions of twelve-step facilitation-* ***TSF***

or *4 sessions of motivational enhancement therapy –* ***MET***

Project MATCH Research group *Addiction* 1997;**92**:1671-98

PROJECT MATCH: 1 year outcome

Time to First Drink, and Time to 3 Successive Heavy Drinking Days, better in TSF than CBT or MET

Highly dependent did best in TSF (low dependence better in CBT)

At 3 years, still slight advantage on some measures to TSF (40% regularly attended AA)

Project MATCH Research group *Addiction* 1997;**92**:1671-98

Difference greatest where family/environmental support for abstinence was low

Longabough et al (1998). *Addiction* 93:1313-1334

Scottish cost-effectiveness study

Health Technology Board of Scotland, 2003

Slattery *et al* **Prevention of Relapse in Alcohol Dependence**

www.docs.scottishmedicines.org/docs/pdf/Alcohol%20Report.pdf

‘Patients should be encouraged to attend AA, particularly those who live or work in environments where there is a lot of drinking and little support for abstinence’

Randomised Controlled trial of intensive referral to 12 step self help groups: Timko and DeBenedetti, *Drug Alc Depend* 2007; 90:270-9

N=345 ; 96% had previous addiction treatment.

Random assignment to:

standard referral

or intensive referral (counselors linked patients to 12-step volunteers and checked on meeting attendance).

One-year follow-up (93%).

RESULTS: abstinence rates 51% (intensive referral)

41%,(standard referral) p=0.048.

(intensive referral = more attended meetings)

“12-step involvement mediated the association between referral condition and alcohol and drug outcomes”

Dual diagnosis (i.e. addiction + serious mental illness)

Bogenschutz et al

J Subst Abuse Treat. 2014 46:403-11.

"12-step facilitation for the dual diagnosed: A randomized clinical trial"

No advantage in terms of alcohol/drug use

(but more meetings -> better overall outcomes)

Effectiveness of Making Alcoholics Anonymous Easier: a group format 12-step facilitation approach.

Kaskutas *et al* *J Subst Abuse Treat*. 2009 ;37:228-39.

Making Alcoholics Anonymous [AA] Easier (MAAEZ), a manual-guided intervention designed to help clients connect with individuals encountered in AA

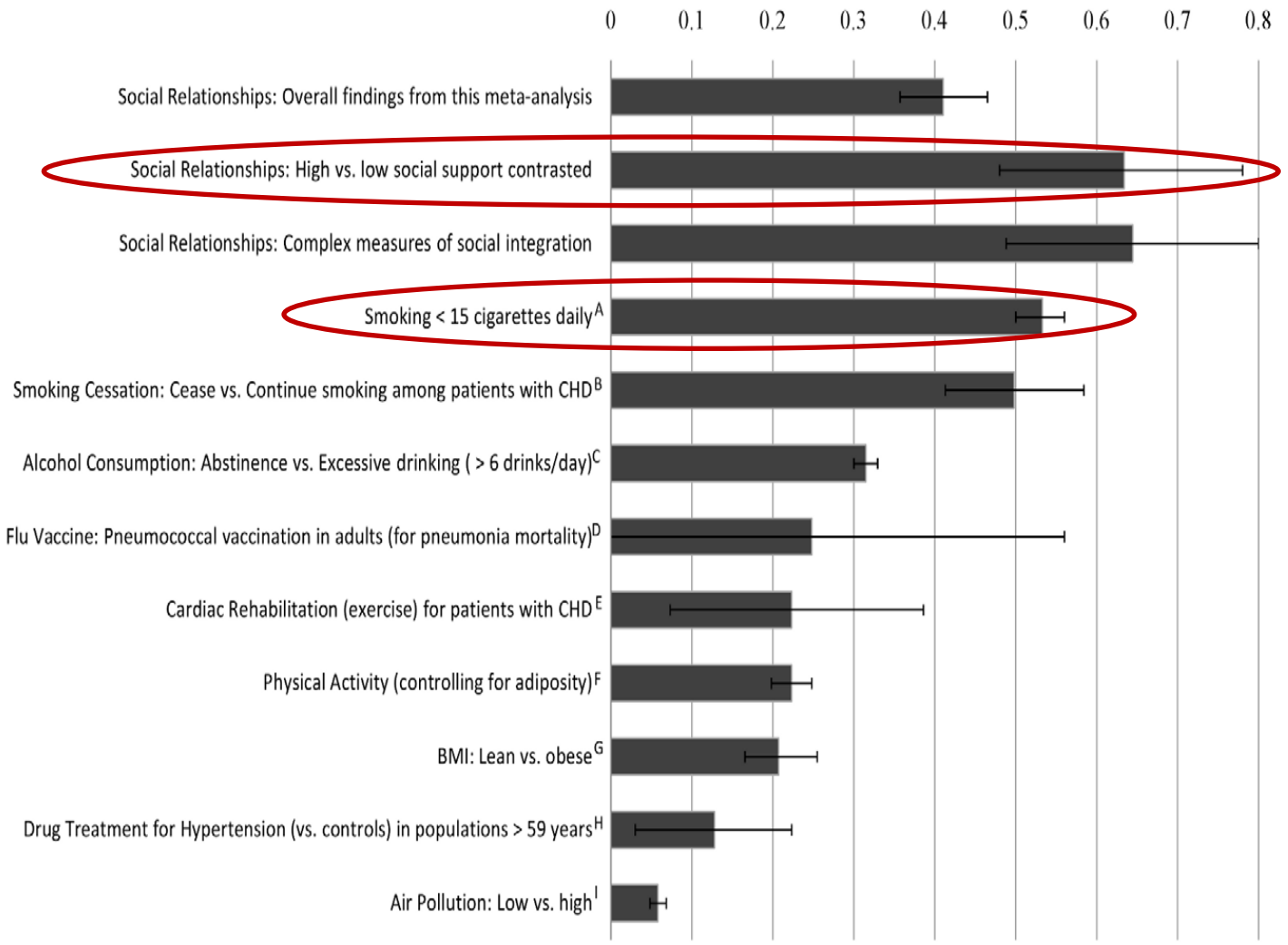
Tested using an "OFF/ON" design (n = 508).

- At **12** months, **ON condition participants had significantly increased odds of abstinence from alcohol (odds ratio [OR] = 1.85) and from drugs (OR = 2.21);**

Abstinence odds increased for each additional MAAEZ session received. MAAEZ appeared especially effective for those with more prior AA exposure, severe psychiatric problems, and atheists/agnostics.

Social relationships predict not just mental health and wellbeing but also 'hard' impacts like mortality : meta-analysis

Holt-Lunstad et al PLoS Med. 2010 27;7(7):e1000316.



Social relationships have as great an impact as smoking cessation, and more than physical activity and issues to address obesity

NICE 2011

(National Institute for Health and Clinical Excellence)

Diagnosis, assessment and management of harmful drinking and alcohol dependence

"For all people seeking help for alcohol misuse:

- give information on the value and availability of community support networks and self-help groups (for example, Alcoholics Anonymous or SMART Recovery) **and**
- help them to participate in community support networks and self-help groups by encouraging them to go to meetings and arranging support so that they can attend"

Measuring outcomes

What is the goal of the after-care?

- Abstinence? (Urinary EtG - ethyl glucuronide)
- Reduction of heavy drinking days?
- *(?reliability of drinking reports)*
- Improvement in biological markers of drinking e.g. serum GGT
- Improve quality of life? (SF36)
- Reduce alcohol-related harm to self and others? (ARPQ)

Personalised treatment goal

e.g. stay in work

stay out of prison

Merci!

Yalom's curative factors in group therapy (1970)

Interpersonal learning

Catharsis

Group cohesiveness

Self-understanding

Development of socialising techniques

Existential factors

Universality

Instillation of hope

Altruism

Corrective family re-enactment

Guidance

Identification/imitative behaviour

Active ingredients of substance use-focused self-help groups

Moos (2008) Addiction,103,387-396

Psychological theories of addictions

- Social control theory: *weak bonds/ poor monitoring/deviant values*
- Social learning theory *expectancies/peer pressure*
- Behavioural economics (choice) theory *–reward competition.*
- Stress and coping theory: *conflict,abuse / impulsivity/ avoidance*

Active ingredients of Self Help Groups

- New norms: *new friends; sponsor; observe*
- New role models
- Engagement in rewarding activities *sharing/making tea!/ helping others*
- Self efficacy and coping skills

4. What are the most common misperceptions or challenges about mutual aid from patients and colleagues?

- What misperceptions do medical or commissining colleagues have about mutual aid?
- What questions or challenges do you see from patients/clients when you talk to them about mutual aid?

‘God’ and spirituality

AA and NA members: only 30% say they belong to a religion (UK gen pop 56%)

- ‘Spiritual, but not religious’: many combine atheism
- GOD : ‘spirit of the universe’ (phrase used in the Big Book)
- Gift of Despair, Group of Drunks,
- life-giver (therefore feminine!)
- Powerless = “I cannot do it alone”

Dossett, W., (2013). Addiction, Spirituality and the Twelve Steps *International Social Work* **56,** 369-383

Spirituality

deep-seated sense of meaning; and purpose in life,

a sense of belonging

acceptance, integration and wholeness

recognition that to harm another is to harm oneself, and equally that helping others is to help oneself.

Spiritual skills (www. rcpsych.org.uk)

- being self-reflective and honest;
- being able to remain focused in the present, remaining alert, unhurried and attentive;
- being able to rest, relax and create a still, peaceful state of mind;
- developing greater empathy for others;
- finding courage to witness and endure distress while sustaining an attitude of hope;
- developing improved discernment, for example about when to speak or act and when to remain silent;
- learning how to give without feeling drained;
- being able to grieve and let go.

Sounds like desired outcomes of good psychotherapy?

(Many studies show lack of emotional/affective understanding in alcoholics, not due to family history but to the drinking eg Monnot et al 2001, Alc Clin Exp Res 25:362-9)

- Do you experience a feeling of belonging and being valued, a sense of safety, respect and dignity?
- Is there openness of communication both ways between you and other people?

Fostering an awareness that serves to identify and promote values such as:

creativity,
patience,
perseverance,
honesty,
humility
kindness,
compassion,
equanimity,
hope and joy

5. Is mutual aid an integrated part of your local alcohol treatment pathways?

- How do you ensure good links between treatment services?
- How well understood locally are the national policies and approaches driving integration of mutual aid?

‘Recovery’

GOVERNMENTAL FRAMEWORKS

FOR SUBSTANCE MISUSE

Scotland: The Road to Recovery (2008)

Wales: Substance Misuse Framework for Wales (2013)

England: Putting Full Recovery First (2012)

PHE: the costs

Keith Humphreys, PhD
Professor (Research) of Psychiatry and Behavioural Sciences
Stanford Health Policy Associate
Senior Policy Advisor at the White House
'Circles of Recovery' Cambridge University Press, 2003

Over 3 years per-person treatment costs for AA group:

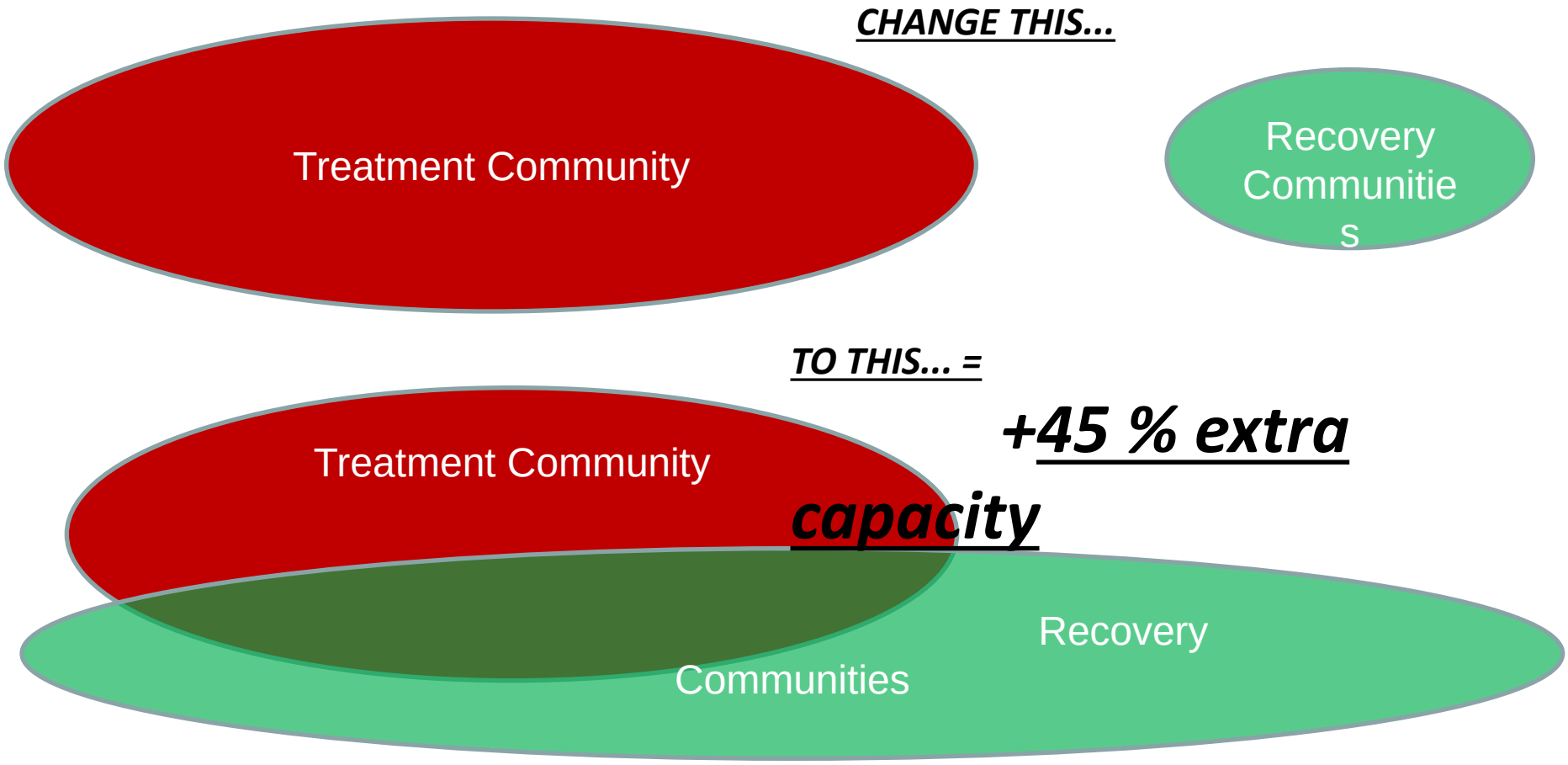
45 % lower

than 'professional' treated groups with similar outcomes.

Mutual Aid (AA) reduces on-going treatment costs

Humphreys, K., & Moos, R. (1996). Reduced substance abuse-related health care costs among voluntary participants in Alcoholics Anonymous. Psychiatric Services, 47, 709-713. Inflated to 2012 prices and converted to approximate pounds sterling.

Integrating Treatment & Recovery (after Mark Gilman).



Recovery communities in action

- Show: You-tube ‘recovery’ Avon and Wiltshire NHS Partnership, 2013
- https://www.youtube.com/watch?v=t6ickGa5EOQ&feature=youtu.be

Health Technol Assess. 2015 Jan;19(6):1-168. doi: 10.3310/hta19060.

The effectiveness and cost-effectiveness of diversion and aftercare programmes for offenders using class A drugs: a systematic review and economic evaluation.

Hayhurst et al

- Adult class A drug-using offenders diverted to treatment or an aftercare programme for their drug use.
- **INTERVENTIONS:**
- Programmes to identify and divert problematic drug users to treatment (voluntary, court mandated or monitored services) at any point within the criminal justice system (CJS). Aftercare follows diversion and treatment, excluding care following prison or non-diversionary drug treatment.
- **DATA SOURCES:**
- Thirty-three electronic databases and government online resources were searched for studies published between January 1985 and January 2012, including MEDLINE, PsycINFO and ISI Web of Science. Bibliographies of identified studies were screened. The UK Drug Data Warehouse, the UK Drug Treatment Outcomes Research Study and published statistics and reports provided data for the economic evaluation.
- **METHODS:**
- Included studies evaluated diversion in adult class A drug-using offenders, in contact with the CJS. The main outcomes were drug use and offending behaviour, and these were pooled using meta-analysis. The economic review included full economic evaluations for adult opiate and/or crack, or powder, cocaine users. An economic decision analytic model, estimated incremental costs per unit of outcome gained by diversion andaftercare, over a 12-month time horizon. The perspectives included the CJS, NHS, social care providers and offenders. Probabilistic sensitivity analysis and one-way sensitivity analysis explored variance in parameter estimates, longer time horizons and structural uncertainty.

- SEE OVER

- Sixteen studies met the effectiveness review inclusion criteria, characterised by poor methodological quality, with modest sample sizes, high attrition rates, retrospective data collection, limited follow-up, no random allocation and publication bias. Most study samples comprised US methamphetamine users. Limited meta-analysis was possible, indicating a potential small impact of diversion interventions on reducing drug use [odds ratio (OR) 1.68, 95% confidence interval (CI) 1.12 to 2.53 for reduced primary drug use, and OR 2.60, 95% CI 1.70 to 3.98 for reduced use of other drugs]. The cost-effectiveness review did not identify any relevant studies. The economic evaluation indicated high uncertainty because of variance in data estimates and limitations in the model design. The primary analysis was unclear whether or not diversion was cost-effective. The sensitivity analyses indicated some scenarios where diversion may be cost-effective.
- **LIMITATIONS:**
- Nearly all participants (99.6%) in the effectiveness review were American (Californian) methamphetamine users, limiting transfer of conclusions to the UK. Data and methodological limitations mean it is unclear whether or not diversion is effective or cost-effective.
- **CONCLUSIONS:**
- High-quality evidence for the effectiveness and cost-effectiveness of diversion schemes is sparse and does not relate to the UK. Importantly this research identified a range of methodological limitations in existing evidence. These highlight the need for research to conceptualise, define and develop models of diversion programmes and identify a core outcome set. A programme of feasibility, pilot and definitive trials, combined with process evaluation and qualitative research is recommended to assess the effectiveness and cost-effectiveness of diversionary interventions in class A drug-using offenders.

Alcohol Alcohol. 2015 Jan 19. pii: agu107. [Epub ahead of print]

A Pilot Study on the Feasibility and Acceptability of a Text Message-Based Aftercare Treatment Programme Among Alcohol Outpatients.

Haug S[1]

- Clients treated for alcohol use disorders from three Swiss outpatient alcohol treatment centres were invited by their counsellors to participate in a study testing an interactive aftercare programme employing the use of text messages and personal phone calls. Fifty study participants were randomly assigned to either the 6-month aftercare programme (n = 25) or treatment as usual (n = 25). The intervention consisted of (a) monitoring of self-selected drinking goals at regular intervals, (b) motivational text messages to stick to self-selected drinking goals and (c) proactive telephone calls from counsellors when participants neglected to stick to their drinking goals or expressed a need for support. Follow-up interviews were conducted 6 months after randomization.
- **RESULTS:**
- Throughout the programme, participants received a total of 421 text message prompts. Out of these, participants provided valid replies to 371 (88.1%) within 48 h. Out of the 25 participants in the intervention group, 11 (44.0%) sent at least one call-for-help reply. Based on complete case data, at risk alcohol use at follow-up was 41.7% in the control group and 28.6% in the intervention group (OR = 0.56, 95% CI = 0.16-1.95, P = 0.36).
- **CONCLUSIONS:**
- The interactive low-intensive aftercare programme was well accepted by the participants. Testing its efficacy within an adequately powered randomized controlled trial might be reasonable.

Alcohol abstinence, non-hazardous use and hazardous use a decade after alcohol-related hospitalization: registry data linked to population-based representative postal surveys

BMC Public Health. 2014 Aug 24;14:874. doi: 10.1186/1471-2458-14-874.

Ahacic K[1], Kennison RF, Kåreholt I.

.

Registry data concerning alcohol-related hospitalizations between 1996 and 2007 were linked to two representative surveys, in 2006 and 2007, of residents of Stockholm County. Relevant contrasts were modeled, using logistic regression, in the pooled sample (n = 54 955). Ages were 23-84 years at follow-up.

- **RESULTS:**
- Among persons previously hospitalized (n = 576), half reported non-hazardous use. Non-hazardous use was less prevalent than in the general population--and the extent of non-hazardous use did not change over time following hospitalization. There were no significant age differences, but non-hazardous use was less frequent among people with repeated episodes of care. One in six was abstinent. Abstinence was more common among the old, while hazardous use (exceeding 14 drinks per week for men, and 9 drinks per week for women) decreased with age. Abstinence also increased over time; among persons hospitalized ten years ago, the abstinence rate was twice that of the general population. Associations with hazardous use over time were less conclusive. Hazardous use among those previously hospitalized decreased over time in one sample but not in the other. After pooling the data, there were indications of a decrease over time following hospitalization, but more prevalent hazardous use than in the general population.
- **CONCLUSIONS:**
- Following alcohol-related hospitalization, abstinence increased, and there was no evidence of regression towards the mean, i.e., towards non-hazardous use. Abstinence was also more widespread among previously hospitalized persons of older ages. With advancing age, changing hazardous alcohol habits among previously hospitalized appears to yield a trend towards promotion of abstinence.

- Alcohol Treat Q. 2014 Apr 1;32(2-3):271-298.
- **Daily Spiritual Experiences and Adolescent Treatment Response.**
- Lee MT[1], Veta PS[2], Johnson BR[3], Pagano ME[2].
- **Author information**
- **Abstract**
- The purpose of this study is to explore changes in belief orientation during treatment and the impact of increased daily spiritual experiences (DSE) on adolescent treatment response. One-hundred ninety-five adolescents court-referred to a 2-month residential treatment program were assessed at intake and discharge. Forty percent of youth who entered treatment as agnostic or atheist identified themselves as spiritual or religious at discharge. Increased DSE was associated with greater likelihood of abstinence, increased prosocial behaviors, and reduced narcissistic behaviors. Results indicate a shift in DSE that improves youth self-care and care for others that may inform intervention approaches for adolescents with addiction.