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## Drug Matrix cell C1: Management/supervision: Reducing harm

**S** **Forced discharge and drop-out mean more post-methadone deaths** (1999). Cites **US study** (1998) which found that in the first year after leaving a methadone programme the death rate was eight times higher than among patients who remained in treatment; all nine deaths were of patients who had dropped out or been discharged for breaking programme rules, and two-thirds were overdoses. For related discussions [click here](#) and [here](#) and scroll down to highlighted headings.

**K** **Slow 'cascade' of anti-overdose training from staff to other staff and patients** (2011). Drug service staff in England trained in overdose recovery using naloxone then trained other staff and patients, but why on average did each clinician train just one drug user every 11 months? From same study [report on resulting use of naloxone](#) (2008) and a [follow-up](#) (2009) of some of the trainees which revealed reluctance to carry around naloxone kits, partly due to having completed treatment intended to divorce them from drug use and by extension, drug using associates. For discussion [click here](#) and scroll down to highlighted heading.

**K** **Prematurely discharging heroin users from treatment risks lives** (2007). Reports on a **large Italian study** which demonstrated the protection against overdose deaths afforded by being in treatment, and the danger of leaving with reduced tolerance to opiate drugs but still vulnerable to relapse. For managers, highlights the dilemma of balancing retention with throughput, and enforcing expectations and rules with keeping 'problem' patients safe(r). For discussion [click here](#) and scroll down to highlighted heading.

**K** **Supervised consumption cuts methadone deaths** (2010). From the mid 1990s British addiction treatment clinics started to require patients to take their methadone under medical supervision, preventing diversion to the illicit market and thousands of overdose deaths.

**K** **Dilemma posed by continued illegal drug use during methadone treatment** (2013). In Norway even patients in the top quarter for continuing drug use while on methadone benefited from a near four-fold reduction in the number of courses of hospital treatment needed for drug-related physical complaints. These episodes rebounded when patients were forced to or chose to leave. Similar findings have come [from Sweden](#) (2009), where during an enforced gap in treatment for breaking programme rules (**usually** by continuing to use illegal drugs), hospital admissions rose only to fall again when the same addicts were allowed to return. For related discussions [click here](#) and [here](#) and scroll down to highlighted headings.

**K** **Vancouver's needle exchange: lessons of failure** (2012). The city which hosted North America's most prolific exchange nevertheless saw HIV and hepatitis C sweeping through its drugs quarter. Prime among the reasons are believed to have been restrictions imposed and self-imposed on the service, including limited opening hours and one-for-one exchange. Related [review below](#). For discussion [click here](#) and scroll down to highlighted heading.

**R** **Don't restrict supply of injecting equipment** (2013). Extensive UK review updated in 2013 which underpinned NICE guidance [below](#). The reviewers found consistent evidence that more liberal supply of injecting equipment was associated with less risky injecting practices. For related discussion [click here](#) and scroll down to highlighted heading.

**R** **Challenge of reconciling community concerns with needle exchange priorities** (2003 and 2004). Four-part series from Drug and Alcohol Findings highlights the challenge of freely distributing the "flood" of injecting equipment needed to curtail hepatitis C and managing local wariness about needle exchange fuelled particularly by discarded syringes. [Part 2](#) includes the instructive case study of Vancouver, subject of [key study above](#). For discussion [click here](#) and scroll down to highlighted heading.

**G** **NICE says abundance is the objective for injecting equipment provision** ([UK] National Institute for Health and Care Excellence, 2014). UK's health technology regulator says exchange service managers should aim for every injector to have more sterile injecting equipment than they need for every injection. Also available NICE-endorsed checklist to [audit compliance](#) (2015) with recommendations. For discussion [click here](#) and scroll down to highlighted heading.

**G** **Scottish guidance on running and commissioning needle exchanges** (Scottish Government, 2010). Includes needs assessment, locations, opening hours, staff training, injecting equipment provision policies, and integration with other services. Calls on services to redress the large shortfall in supplying enough needles/syringes for each injection.

**G** **WHO guide to starting and managing needle and syringe programmes** (World Health Organization [etc], 2007). Rare in this sector to have what is effectively a management manual, a sign of the importance WHO attaches to making needle exchanges as effective as possible to combat HIV. Also issued by a UN agency is a [similar guide](#) (United Nations Office on Drugs and Crime, 2014) for prisons and other closed settings. For discussion [click here](#) and scroll down to highlighted heading.

**G** **UN guide on planning, coordinating and managing comprehensive HIV and hepatitis C programmes for injectors** (United Nations Office on Drugs and Crime, 2017). Includes guidance on needle exchange, substitute prescribing, treatment of infection, naloxone distribution, education, and addressing risk of sexual transmission.

**G** **How UK treatment services can help reduce drug-related deaths** (Collective Voice and NHS Substance Misuse Provider Alliance, 2017). Recommendations and practice examples developed (with the support of Public Health England) by bodies representing drug and alcohol services in England.

**G** **Scottish Drugs Forum naloxone web site**. Offers resources, advice, guidance, information and news on programmes featuring the drug naloxone which reverses opiate overdose. Being reconstructed at time of writing.

**G** **EU advice on preventing overdose through naloxone programmes** (European Monitoring Centre for Drugs and Drug Addiction [EMCDDA], 2016). Background information on naloxone and in chapter 5 advice on setting up take-home naloxone training and distribution programmes.

**G** **Balancing recovery ambition with safety and harm reduction** ([UK] National Treatment Agency for Substance Misuse, 2012). Clinical consensus developed for UK government on how drug-based treatment for heroin addiction can be made more recovery-oriented without losing harm reduction benefits. See also [supplement](#) (2013) on reviewing patients to see if treatment should be changed or ended. For discussion [click here](#) and scroll down to highlighted heading.

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**What is this cell about?** As described more fully in [cell A1's](#) bite, about reducing the harms experienced by the user **as a result of** their drug use, without necessarily reducing use or seeking to overcome dependence. Common interventions include needle exchanges, overdose prevention programmes, and substituting a legally prescribed drug of the same type for the original (and usually illegally obtained) substance, also considered as a treatment for addiction in [row 3](#) of the matrix. This cell is not about the effectiveness of the intervention itself (for which see [cell A1](#)), but how implementation and effectiveness are influenced by the management functions of selecting, training and managing staff, and managing the intervention programme – less commonly researched topics.

**Where should I start?** If you find yourself having to manage a needle exchange (or establish one from scratch), it would be hard to find a better starting point than the World Health Organization's [guide](#) on how to maximise your programme's anti-infection potential. That such a guide should be produced (along with another on [exchange in prison](#)) is a sign of the importance WHO attaches to making needle exchanges effective, and in particular, increasing their coverage – the degree to which sterile equipment is in practice available in sufficient numbers to be used for every injection. [In the UK](#) and elsewhere, adequate coverage recognised as the key to the success of needle and syringe programmes.

WHO's guide seems to cover just about everything you need to run an exchange, in a text characterised by a determination to work out in detail what commitment to the human rights of injectors and to public health means for the nuts and bolts of needle exchange provision. Another strength is its awareness of what exchanges must fit their services around – the reality of life for injectors – yet also of the need for pragmatism and 'politics' in responding to community concerns and authorities like the police, who can make or break exchange provision. An example is found on page 19, where the guide explains why insisting on one-for-one exchange is bound to lead to some avoidable sharing of equipment, yet recognises that services may need to start up this way where there is needle and syringe provision is seen as controversial or undesirable.

A [broader guide](#) to planning and implementing anti-infection policies and services has also been produced by WHO and other agencies of the United Nations. It includes needle exchange alongside other measures, showing what a comprehensive national programme would look like. The emphasis is more on planning and establishing services than day-to-day management, but managers will still find important principles and guidance.

**Highlighted study** The risks for opioid users of fatal overdose after leaving (or being forced to leave) treatment were comprehensively and graphically demonstrated in the large-scale [Italian VEdeTTE study](#), in the process highlighting the life-and-death dilemmas faced by managers in determining treatment exit policies.

Leaving [methadone treatment](#) and the post-discharge period after completing [residential detoxification](#) were already established as times of heightened risk. VEdeTTE went further, documenting the risk of leaving any treatment among 10,454 heroin users who had started treatment in 1998–2001 at about a quarter of Italy's national health service treatment centres. Unlike similar UK studies, it **did not rely** entirely on routinely collected statistics, but gathered data directly from the patients, enabling it to **adjust** for pre-existing risk factors. Apart from the therapeutic communities, nearly all the treatments were conducted on an outpatient basis.

The results showed that the risks of leaving treatment were more general than previously appreciated. Across the whole sample, for an equivalent number of people over an equivalent time, overdose deaths after leaving were 11 times more frequent than during treatment. Narrowing in on the month after leaving, the rate was 27 times higher.

VEdeTTE showed that the post-detoxification risk extended to outpatient as well as inpatient programmes; leaving outpatient detoxification was associated with an overdose death rate over nine times greater than during treatment overall. Deaths were concentrated among the detoxification 'successes'. Patients who had completed outpatient methadone-based detoxification were four times as likely to die from overdose as those who had failed to complete; six of the seven deceased were detoxification completers, just one a drop-out.

Worst of all was the overdose death rate after leaving residential therapeutic communities – 23 times the rate during treatment overall, a striking contrast to zero deaths while protected by the residential environment. All nine post-rehabilitation deaths were among people who had dropped out of the centres.

Our [analysis](#) focused on overdose deaths after detoxification and residential rehabilitation, but the death rate **also rose** by over seven times from before to after exiting methadone maintenance programmes, leaving the former patients over eight times more likely to fatally overdose than during treatment overall. All but one of the five deaths were among programme drop-outs.

Of particular interest for the formulation of treatment-exit policies were the differences in who was most at risk after leaving: drop-outs from residential rehabilitation and methadone maintenance, but in outpatient detoxification, the people who did not drop out and instead completed the programme.

Though the numbers were too small to be sure, VEdeTTE's analysts also calculated that the balance between the protection associated with being in treatment versus the steeply increased risk of fatal overdose in the


month after leaving, meant that short periods in treatment were likely to be associated with more overdose deaths than no treatment.

Reinforced by [other studies](#) including some from the UK, VEdeTTE's results seems to emphasise the importance of creating no unnecessary barriers to patients completing rehabilitation and of making involuntary discharge a rare last resort, of retaining patients in methadone maintenance [even if](#) they do not fully comply with treatment and continue to use illegal drugs, and of post-treatment support and/or follow-on treatment to prevent deaths due to resumption of opioid use after losing tolerance to the drugs.


Treatment exit through drug-free discharge is considered a marker of successful treatment, but it seems 'success' can sometimes carry a much higher risk of death than 'failure'. The implication is that concern in the name of 'recovery' to increase drug-free treatment completions and to meet patients' ambitions to stop taking opiate-type drugs, must be tempered by awareness of the risks. The challenge posed for managers of treatment services is the subject of the [next section](#).

## Issues to consider and discuss

► **Does staying safe(r) mean staying?** If you have not already absorbed these, look back at the findings of the Italian VEdeTTE study described in the [Highlighted study](#) section. They bring home the challenge to managers of setting criteria and procedures for the possibly life-and-death decision on terminating treatment, and of establishing programmes patients want to stay in, which as far as possible avoid terminating treatment, yet productively challenge patients and enforce limits required for a safe and therapeutic environment.

In one way that challenge is at its height when there is no 'natural' end to treatment, as in methadone maintenance and allied treatments, which substitute a safer, legal and less disruptive opioid drug for the one the patient has become dependent on. As normally implemented, these treatments act like a light switch: rapid remission in illegal heroin use when switched on, rapid and life-threatening relapse on departure. The evidence has been there [for decades](#) and is particularly strong from [Scandinavia](#): for a brief account [unfold](#)  the supplementary text.

This was one of the issues faced by a government-initiated [expert review](#) of methadone and allied treatments in England, and [faced again](#) when via the Chief Medical Officer, government asked the experts to look again at how and when clinicians should review continuation of a patient's treatment.

Published in 2013, the [expert group's response](#) extracted the therapeutic positives from this challenge in the form of a renewed emphasis on patients progressing in treatment towards more satisfactory lives – meaning more *could* stop drug use and leave treatment sooner – while rejecting extensions to this ambition which pose moving out of treatment as a *must-do* step towards what [has been labelled](#) "full" recovery. Neither leaving treatment in general, nor withdrawing from prescribing-based treatments in particular, are seen in the report as essential to recovery: for more about the group's conclusions [unfold](#)  the supplementary text.

The group's thinking fed into the broader [clinical guidelines](#) developed by experts in the field and published in 2017 by UK national governments. They stress the importance of aftercare planning, including scheduled 'recovery check-ups', and provision for rapid re-engagement in treatment of former patients at risk of relapse. A degree of continued drug use is not in itself seen as a reason for declaring treatment a failure and, by extension, also not in itself a reason for terminating that treatment, which may need in some cases to be lifelong. But they acknowledge that involuntary discharge can be justified if a patient is not benefiting from treatment: "Any response should be based on the assessment of relative risks to the patient and staff, while maintaining the integrity of the treatment programme ... A decision to temporarily or permanently exclude a patient from a drug treatment service or provide coerced detoxification should not be taken lightly. Such a course of action can put the patient at an increased risk of overdose death, contracting a blood-borne virus or offending."

What amounts to a professional obligation is placed by the guidelines on clinicians, commissioners and service providers to make non-agreed termination of treatment very much the exception, and a decision taken under the weight of the knowledge that it could place the patient – and their associates and the wider community – at greater risk.

Take a look at the [conclusions of the expert group](#) on reviewing, adjusting and terminating maintenance treatment, and the stance taken in the [clinical guidelines](#) on similar issues in section 4.6 starting page 104. Are they clear enough, should they have been more explicit about when and when not to terminate, or is this best left to each treatment service's policies and the judgement of patients and clinicians? Bear in mind that (as seems likely to be increasingly the case) when treatment slots are too few to meet demand, each patient retained in treatment on the grounds that they are partially benefiting or at least not deteriorating, blocks a slot for another patient who might benefit more. Yet as a patient, you may feel you have the right to have your welfare placed centre stage by your treatment service, rather than weighed in the balance with that of potential patients.

► **Are the days of needle 'exchange' behind us?** 'Exchange' [used to be](#) a distinctive and essential element of needle exchange services – that new sterile injecting equipment would be supplied (more or less strictly) in return for used equipment, taking these potential disease carriers out of circulation and keeping the streets clear enough of needles and syringes to defuse opposition to 'colluding' with illegal drug use and

attracting ‘junkies’ to the neighbourhood. In the early days of needle exchange, the ‘return rate’ was a key statistic – a badge of respectability.

From the [fieldwork](#) conducted for NICE in preparation for [their recommendations](#) on needle exchange, it seems these days this former priority mainly lingers on only as an unenforced ambition, honoured almost entirely in the breach. “Unrestricted distribution” is now the norm, and insisting on return of used equipment before new equipment is supplied is seen as a barrier to ensuring every injector has more than enough equipment to inject safely every time, needed to appreciably intercept transmission of hepatitis C. Instead of returning used equipment to exchanges, ‘drop boxes’ or safe bins where injectors can dispose of their equipment have gained greater prominence.

*In the early days of needle exchange, the ‘return rate’ was a key statistic – a badge of respectability*

For confirmation of how needle exchange can be undermined by restrictive exchange (and other) policies, look at [one of our key studies](#). It explains why despite Vancouver hosting what was then North America’s most prolific needle exchange, nevertheless HIV and hepatitis C swept through the Canadian city’s drugs quarter. Vancouver was also a case-study city in [Part 2](#) of a series by Drug and Alcohol Findings on needle exchange and hepatitis C. The importance of the city’s experience can hardly be overestimated – though more as a lesson in what not to do than as an exemplar.

In Britain, do any of the original reasons for the exchange policy still hold to any degree? According to the research report on the pilot exchange schemes, the rationale was:

- To stop used and possibly infected needles being left in public and other places, or otherwise disposed of in a way that may be hazardous to others.
- Exchanging syringes makes it less likely that syringes will be circulated and reused.
- Making the client return to the agency frequently increases the opportunity for advice and counselling.
- Needle exchange schemes would find it difficult to operate if there were substantial complaints from the public about discarded syringes.

► **The challenge of planning for relapse in a recovery-oriented treatment service** Naloxone rapidly reverses the effects of opiate-type drugs, including the respiratory depression which causes overdose. It became the main new hope for curbing the death rate after in 2005 UK law was amended to permit emergency administration by any member of the public. As a technique, administering naloxone seems close to a sure-fire solution to this top cause of sudden death among drug users, but as often the case, implementation rather than efficacy is the weak link.

Obstacles to effective distribution are many. Among them is a contradiction between the optimistic prospect of recovery from addiction, and preparing for this ambition to crash in the form of life-threatening relapse. For treatment services, acknowledging the likelihood that their patients will relapse [may be a hard pill to swallow](#), and catering for this by training clients and families to administer naloxone may seem to counter-therapeutically undermine the optimism at the heart of the recovery movement. Similarly, for patients looking forward to a new life where they have escaped drugs and drugtaking circles, learning a lifesaving technique predicated on continued drug use and/or continued contact with drug users [may feel](#) undermining and irrelevant, [one reason](#) why issued naloxone kits sometimes get unused.

These sensitivities [may mean](#) that the times when opiate users are most vulnerable to overdose – after successfully ‘graduating’ from treatment having achieved abstinence – are also the times when they and their families are least receptive to anti-overdose training.

Going back several decades, treatment and rehabilitation services, including those which today would be called recovery-oriented, found ways of accommodating similar apparent contradictions when it became important to counsel drug users leaving treatment about the risks of HIV transmission, effectively acknowledging the possibility of relapse to injecting drug use. How in the ‘recovery’ era will this new challenge of accommodating to the possibility – even the likelihood – of relapse play out? How as a manager do you guide your staff in unshakably maintaining optimism for their patients and clients, without this seeming to be flatly contradicted by issuing them with naloxone kits and conducting related training?

*How do you maintain optimism without this seeming to be flatly contradicted by issuing naloxone kits?*

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