Absconding from psychiatric hospitals: a literature review

Report from the Conflict and Containment Reduction Research Programme

Duncan Stewart, Institute of Psychiatry
Len Bowers, Institute of Psychiatry

November 2010
Section of Mental Health Nursing
Institute of Psychiatry
London SE5 8AF
**Background**

Unauthorised absence from a psychiatric hospital has potentially serious negative consequences for patients, but fears for public safety appear unfounded. Homicides following absconding are extremely rare, and patients are at greater risk of suicide: a quarter of all inpatient suicides occur among patients who have absconded from hospital (National Confidential Enquiry into Suicide and Homicide, 2009). Less prominent consequences include self-harm, physical health problems and missing medication. Absconding also places a burden upon staff who worry about the safety of absconding patients and upon the police who are often involved in returning patients to hospital. This review examines the incidence, duration, antecedents, outcomes and temporal ecology of absconding, as well as the demographic and clinical characteristics absconding patients.

**Literature search**

This literature review expanded on a previous search of absconding literature by Bowers et al. (1998) which was conducted by electronic searches on CINAHL (1982-09), PSYCHLIT (1974-09) and the Cochrane Database of Clinical Trials (1997 issue 4) using search terms ‘abscond’, ‘escape’, ‘elope’, ‘AWOL’, ‘runaway’ and variants. For this study, a search of PsycINFO (1872-2009), Ovid MEDLINER (1966-09), EMBASE Psychiatry (1994-09), CINAHL (1982-09), British Nursing Index (1985-09) and all EBM reviews databases (1985-09) were conducted. The search terms used were: ‘AWOL’, ‘elope’, ‘abscond’, ‘escape’, ‘unauthorised absence’, ‘irregular discharge’ and variants. Only published studies reporting empirical findings were included in the review. The search did not include theses or other grey literature, nor did it include policy documents or other analyses. The review excludes studies of children, adolescents and dementia patients, although occasionally these patients were included in hospital wide analyses of absconding. The final number of identified empirical papers was 75.

**Methodologies of the studies reviewed**

Fifty eight of the studies were retrospective analyses of official incident records, although this was sometimes supplemented with descriptive data from other sources. Comparison groups were included in 32 studies. These were usually the non-absconding hospital population during the study period or a randomly selected sub-sample. Attempts to construct a control group matched to absconders on certain demographic or background features was much less common (n=8). Six studies used a repeated measures design to measure the effectiveness of various programmes to reduce absconding. A further four studies provided other forms of longitudinal data, three of which involved some kind of intervention. The review also includes seven studies with qualitative data describing patient and staff experiences of absconding. The studies were conducted in various types of ward, ranging from acute wards (n=31), forensic units (n=11), to a mix of wards (including several categories; n=33). Given the diversity of settings, it is likely that patient populations varied greatly between studies. The studies were conducted in seven countries, the majority being
conducted in the UK (n=32) or USA (n=27). Other countries represented were Canada (n=8), India (n=4), Ireland (n=2), Australia (n=1) and Iran (n=1).

Absconding was usually defined as patients being absent from the ward without official permission (AWOL). However, there were variations in the time period a patient could be absent before being classified as an abscond, ranging from 1 hour (Bowers et al. 2003a) to 72 hours (Atkinson, 1971). Some papers referred to a cut-off of 24 hours or before midnight on the day of absconding, but most studies did not specify a time period. The lack of a precise definition reflects a reliance on official records of incidents. Some studies were of irregular discharges of various sorts, so included data for patients who were AWOL as well as those discharged against medical advice (AMA). The characteristics of these groups were usually compared, and in only one case were the data combined in such a way that information for the two groups could not be distinguished.

This review excludes data for patients classified as AMA wherever possible, unless a paper identifies a specific contrast to AWOL patients which may be of interest. Not all studies included patients who had absconded while on leave (Farragher et al. 1996; John et al. 1980; Short, 1995; Tomison, 1989), while one study only included patients who left against medical advice or compulsory patients who failed to return from leave (Andoh, 1999). This was also the only study to explicitly limit the definition of AWOL to compulsory patients, but the ambiguity of which patients are classified as absconders may well result of an over-representation of involuntary patients. These patients are likely to cause staff the greatest concern if they leave the ward or hospital, and hence are more likely to be counted as official incidents. This issue is explored in more detail below. The definition of absconding for forensic studies included patients leaving the secure hospital grounds (often referred to as an escape) and those who absconded while on some sort of escorted trip outside the hospital (e.g. for trial).

Analytic procedure
The aim of the literature review was to establish existing evidence for and against the working model and assess commonality and links between different conflict and containment types such as patient profiles, chains of events, patient experiences, circumstances of use, etc. A structured data extraction tool was created with various headings including sample, methodology, admission status, age, gender, ethnicity, ward type, service setting, risk status, time spent on ward, rates of restraint, antecedents/causes, patients’ views, staff views, etc. Where published papers provided empirical evidence, this was entered on the tool. The headings of the resultant matrix have then been summarised for the purposes of this review. A hierarchy of evidence was established to rate the weight of each study in relation to the project’s aims. The most weight was given to studies conducted in the UK, on acute wards and/or PICUs, studies with large samples and to findings replicated across studies.

Incidence
There was wide variation in the methods employed to present rates of absconding. The lack of standardised measures in the literature makes it extremely difficult to compare findings across studies. To aid comparisons, patient and event based absconding rates were calculated, standardised to 100 beds or admissions per month. A total of 35 studies provided sufficient information to enable calculation of a standardised rate of absconding. Intervention studies are discussed in a separate section below. Patient based rates were more common that event based rates. Thirty-three studies provided enough information to calculate a patient-based standardised rate of absconding: the number of patients absconding per 100 admissions per month (n=23) and the number of patients absconding per 100 beds per month (n=22). An event-based rate could be calculated for 20 studies: the number of incidents per 100 beds per month (n=15) and the number per 100 admissions per month (n=12). Table 1 shows rates of absconding by country, setting and security level. The table also includes information on the definition of absconding used by these studies since this is likely to impact on the reported rates. Using the UK as an example, one study which defined absconding as missing without permission and not returning within one hour (Bowers et al. 2000) had considerably higher rates than the remainder which did not specify this criterion. However, other inclusion and exclusion criteria were common across all the studies included in the review, most notably whether patients who failed to return from leave were included or that the definition of AWOL was limited to patients whose absence caused staff some concern (e.g. of suicide risk). Comparisons of event based rates by country are limited to the USA and UK, since only one study from Australia, Canada, Iran and Ireland provided sufficient data. When comparing event based rates per 100 beds per month, the average was higher for US studies (5.88) than those from the UK (4.20). This modest difference increased when forensic studies were excluded (7.82 and 3.80 respectively). A rate per 100 admissions was available for only one US study, so a comparison was not conducted.
<table>
<thead>
<tr>
<th>Country</th>
<th>Paper</th>
<th>Setting</th>
<th>Definition</th>
<th>Security</th>
<th>Event based rate</th>
<th>Patient based rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>100 beds</td>
<td>100 adm</td>
<td>100 beds</td>
</tr>
<tr>
<td>Australia</td>
<td>Meehan et al. (1999)</td>
<td>Psych unit in gen hosp (28 beds)</td>
<td>AWOL, no return by midnight</td>
<td>Open</td>
<td>45.83</td>
<td>19.74</td>
</tr>
<tr>
<td></td>
<td>Dewar (1961)</td>
<td>Psych hosp (1,500 beds)</td>
<td>AWOL</td>
<td>Mainly locked</td>
<td>0.44</td>
<td></td>
</tr>
<tr>
<td>India</td>
<td>John et al. (1980) and Gangadhar et al. (1981)</td>
<td>Psych hosp</td>
<td>AWOL, no return in 24 hours</td>
<td>Mix</td>
<td>1.33</td>
<td>3.29</td>
</tr>
<tr>
<td></td>
<td>Lal et al. (1977)</td>
<td>Psych hosp</td>
<td>AWOL, no return in 24 hours, no return from leave</td>
<td>Not stated</td>
<td></td>
<td>11.6</td>
</tr>
<tr>
<td></td>
<td>Mubarak Ali et al. (1989)</td>
<td>Psych hosp</td>
<td>AWOL, no return in 24 hours</td>
<td>Mix</td>
<td>1.85</td>
<td></td>
</tr>
<tr>
<td>Iran</td>
<td>Yasini et al. (2009)</td>
<td>8 acute wards in psych hosp</td>
<td>AWOL</td>
<td>Not stated</td>
<td>3.0</td>
<td>2.45</td>
</tr>
<tr>
<td>Ireland</td>
<td>Farragher et al. (1996)</td>
<td>Psych hosp (300 beds)</td>
<td>AWOL</td>
<td>Not stated</td>
<td>1.33</td>
<td>3.2</td>
</tr>
<tr>
<td></td>
<td>Walsh et al. (1998)</td>
<td>Psych hosp</td>
<td>AWOL, not found on grounds</td>
<td>Mix</td>
<td>8.81</td>
<td>5.36</td>
</tr>
<tr>
<td>UK</td>
<td>Antebi (1967)</td>
<td>Psych hosp (1041 beds)</td>
<td>AWOL, no return from leave</td>
<td>Mix</td>
<td>2.27</td>
<td>1.33</td>
</tr>
<tr>
<td></td>
<td>Bowers et al. (2000)</td>
<td>12 acute wards, 5 psych hosp</td>
<td>AWOL, more than 1 hour</td>
<td>Mix</td>
<td>46.89</td>
<td>16.48</td>
</tr>
<tr>
<td></td>
<td>Dickens and Campbell (2001)</td>
<td>Psych hosp</td>
<td>AWOL</td>
<td>Mainly locked</td>
<td>0.89</td>
<td>0.53</td>
</tr>
<tr>
<td>Author(s) (Year)</td>
<td>Institution Type</td>
<td>Bed Capacity</td>
<td>Escape/Return Policy</td>
<td>Security Status</td>
<td>Escape Rate</td>
<td>Return Rate</td>
</tr>
<tr>
<td>-----------------</td>
<td>------------------</td>
<td>--------------</td>
<td>----------------------</td>
<td>----------------</td>
<td>-------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Dolan and Snowden (1994)</td>
<td>Medium secure unit (60 beds)</td>
<td>(464 beds)</td>
<td>Escape</td>
<td>Locked</td>
<td>0.62</td>
<td>4.04</td>
</tr>
<tr>
<td>Falkowski et al. (1990)</td>
<td>Psych hosp (670 beds)</td>
<td></td>
<td>AWOL, cause for concern</td>
<td>Mainly open</td>
<td>3.45</td>
<td>1.49</td>
</tr>
<tr>
<td>Huws and Shubsachs (1993)</td>
<td>Four special hospitals</td>
<td></td>
<td>AWOL, no return from leave</td>
<td>Locked</td>
<td>1.43</td>
<td>1.35</td>
</tr>
<tr>
<td>Milner (1966)</td>
<td>Psych unit in gen hosp (220 beds)</td>
<td></td>
<td>AWOL</td>
<td>Mix</td>
<td>2.75</td>
<td>11.53</td>
</tr>
<tr>
<td>Moore and Hammond (2000)</td>
<td>3 special hospitals</td>
<td></td>
<td>Escape, no return from leave</td>
<td>Locked</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Muller (1962)</td>
<td>Psych hosp (100 beds)</td>
<td></td>
<td>AWOL</td>
<td>Open</td>
<td>2.33</td>
<td>1.09</td>
</tr>
<tr>
<td>Short (1995)</td>
<td>Psych hosp (141 acute beds)</td>
<td></td>
<td>AWOL, cause for concern</td>
<td>Not stated</td>
<td>12.41</td>
<td>19.81</td>
</tr>
<tr>
<td>Smith and Quaynor (1990)</td>
<td>Regional secure unit (30 beds)</td>
<td></td>
<td>Escape, no return from leave</td>
<td>Locked</td>
<td>1.06</td>
<td>12.71</td>
</tr>
<tr>
<td>Tomison (1989)</td>
<td>Psych hosp (316 beds)</td>
<td></td>
<td>AWOL, cause for concern</td>
<td>Open</td>
<td>2.51</td>
<td>8.76</td>
</tr>
<tr>
<td>USA</td>
<td>10 inpatient institutions</td>
<td></td>
<td>AWOL, no return from leave</td>
<td>Not stated</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Atkinson (1971)</td>
<td>University psych unit (96 beds)</td>
<td></td>
<td>AWOL</td>
<td>Open</td>
<td>1.29</td>
<td></td>
</tr>
<tr>
<td>Cooke and Thorwarth (1978)</td>
<td>Forensic psych unit in</td>
<td></td>
<td>Not stated</td>
<td>Not stated</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Study</td>
<td>Setting</td>
<td>Description</td>
<td>Exit Status</td>
<td>Discharge</td>
<td>AWOL Rate</td>
<td>AMA Rate</td>
</tr>
<tr>
<td>----------------------------</td>
<td>----------------------------------</td>
<td>------------------------------------------------------------------------------</td>
<td>----------------</td>
<td>-----------</td>
<td>-----------</td>
<td>-----------</td>
</tr>
<tr>
<td>Greenberg et al. (1994)</td>
<td>Dual diagnosis unit (20 beds)</td>
<td>AMA, AWOL with no return, behavioural discharge</td>
<td>Locked</td>
<td></td>
<td>5.63</td>
<td>8.54</td>
</tr>
<tr>
<td>Kernodle (1966)</td>
<td>State Psych hosp (2,534 beds)</td>
<td>AWOL</td>
<td>Mix</td>
<td></td>
<td>0.73</td>
<td>4.25</td>
</tr>
<tr>
<td>Kleis and Stout (1991)</td>
<td>Psych hosp (170 beds)</td>
<td>AWOL</td>
<td>Not stated</td>
<td></td>
<td>1.50</td>
<td>1.29</td>
</tr>
<tr>
<td>Lewis and Kohl (1962)</td>
<td>Two open units in psych hosp (43 beds)</td>
<td>Not stated</td>
<td>Open</td>
<td></td>
<td>1.42</td>
<td></td>
</tr>
<tr>
<td>Meyer et al. (1967)</td>
<td>Open unit in psych hosp (25 beds)</td>
<td>AWOL requiring staff intervention</td>
<td>Open</td>
<td></td>
<td>20.67</td>
<td>44.29</td>
</tr>
<tr>
<td>Molnar et al. (1985)</td>
<td>Psych unit in gen hosp (80 beds)</td>
<td>AWOL</td>
<td>Open</td>
<td></td>
<td>10.94</td>
<td>5.49</td>
</tr>
<tr>
<td>Molnar and Pinchoff (1993)</td>
<td>Psych hosp (500 beds)</td>
<td>AWOL, no return from leave</td>
<td>Not stated</td>
<td></td>
<td>5.70</td>
<td>2.87</td>
</tr>
<tr>
<td>Morrow (1969)</td>
<td>Max security unit in state psych hosp (280 beds)</td>
<td>Escape</td>
<td>Locked</td>
<td></td>
<td>0.04</td>
<td>0.11</td>
</tr>
<tr>
<td>Raynes and Patch (1971)</td>
<td>Psych unit in gen hosp (20 beds)</td>
<td>AWOL, AMA</td>
<td>Open</td>
<td></td>
<td>10.42</td>
<td>10.55</td>
</tr>
</tbody>
</table>
Since patient based rates were more common in the literature, comparisons included studies from the US, UK, Ireland and India. In terms of patients per 100 admissions, the highest rate was again for the USA (8.92). Rates for other countries were: UK (6.28), India (5.58) and Ireland (4.28). When forensic studies were excluded, rates were for the UK increased to a mean of 8.78, but decreased slightly for the USA (to a mean of 7.90). Using patients per 100 beds the UK was considerably lower than the USA (1.50 vs 4.69). This did not change appreciably when forensic studies were excluded (1.74 vs 5.35). Other countries scored the highest mean value on this measure (8.37), although this reflected a very high rate for the Australian study.

Median values were also compared in order to exclude the influence of extreme scores. Figures 1, 2 and 3 show box plots (excluding forensic studies) for event based rates per 100 beds, and for patient based rates per 100 admissions and beds respectively. For event based rates, the box plot shows less variation in scores among the UK studies (although Figure 1 indicates one UK outlier) and a higher median score for the US papers (3.6 vs 2.5). Figures 2 and 3 also confirm the findings for mean values, namely that UK patient based absconding rates per 100 beds per month were low, but UK studies scored higher than other countries for absconding per 100 admissions per month. This is difficult to interpret because these measures were rarely calculable for the same study. Relative to the size of the unit or hospital, UK rates were low, but when throughput is considered UK rates are marginally higher than those of the USA. This may reflect a higher turnover of patients in the US hospitals (i.e. shorter length of stay) or simply greater number of admissions (the US hospitals tended to be larger than those in the UK).

A number of other studies reported absconding rates which could not be standardised in the form described above. These studies employed a variety of measures to describe the level of absconding, ranging from 0.55% of patients over 10 years for one special hospital (Brook et al. 1999), 1.4% of patients across a period of 13 years at all the English special hospitals (Huws and Shubsachs, 1993), 7 patients and 10.3 incidents per month (Farid, 1991), 10% of all discharges (Chandrasena and Miller, 1988), 14% of patients (Glick et al. 1981), 36% of all discharges (Siegel et al. 1982), 35% of patients during a year (Neilson et al. 1996), to 37% of patients over three months (Spiegel and Younger, 1972). The highest rate was for hospital admissions via court diversion scheme where almost half of patients reported absconding during their stay (Joseph and Potter, 1993). One study of the special hospitals calculated a mean incident rate of 0.48 over 5 years for special hospitals, on the basis of the number of absconding incidents divided by the number of opportunities to escape (episodes of residency or outings)(Moore, 2000). A US study of forensic units reported an average escape rate of 3.14 per unit over a three and a half year period (Enser and MacInnes, 1999). The study also noted an increase in escapes in relation to increased bed numbers during this period. A one-day snap-shot of acute adult psychiatric inpatient wards in England and Wales found that 1% of all detained patients were absent without leave (Ford et al. 1998). Another UK study reported an absconding rate of 0.142 per 100 occupied bed days (Bowers et al. 2007).
Figure 1: Absconds per 100 beds per month

Figure 2: Patients absconding per 100 admissions
Locked and open wards
One factor which may influence absconding is whether or not ward doors are locked. For studies with sufficient data to calculate standardised absconding rates, comparisons were conducted using only those studies which specified whether wards were locked (or mainly locked), open (or mainly open) or mixed. As Table 2 (below) shows, studies of hospitals with locked wards reported lower rates of absconding on every type of measure. As expected, rates of absconding were substantially lower for forensic units than other psychiatric facilities. This was found in both the UK and USA. Yet, even at these secure units, which usually have several layers of security in addition to locked wards, some patients do escape (see later for circumstances of absconding). Excluding forensic hospitals from these calculations limited the data available for comparison. However, the absconding rate per 100 beds per month was 2.20 for non-forensic hospitals with locked wards, still considerably lower than for hospitals with open wards. Box plots in Figures 4 and 5 show the same pattern, for both event and patient rates per 100 admissions.
Table 2: Mean absconding rates by hospital door locking policy

<table>
<thead>
<tr>
<th></th>
<th>Locked</th>
<th></th>
<th></th>
<th>Open</th>
<th></th>
<th></th>
<th>Mixed</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Event</td>
<td>Patient</td>
<td>Event</td>
<td>Patient</td>
<td>Event</td>
<td>Patient</td>
<td>Event</td>
<td>Patient</td>
</tr>
<tr>
<td>100 beds</td>
<td>100 adm</td>
<td>100 beds</td>
<td>100 adm</td>
<td>100 beds</td>
<td>100 adm</td>
<td>100 beds</td>
<td>100 adm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.65</td>
<td>6.06</td>
<td>1.34</td>
<td>4.73</td>
<td>12.68</td>
<td>24.26</td>
<td>7.96</td>
<td>9.47</td>
</tr>
</tbody>
</table>

Figure 4: Absconds per 100 admissions by door locking policy

Figure 5: Absconding patients per 100 admissions by door locking policy
Some studies contrasted rates of absconding between locked and open wards within the same hospital, but the evidence is not conclusive. Five studies reported the majority of absconding incidents were from open wards (Bowers et al. 1999a; Coleman, 1966; Farragher et al. 1996; Richmond et al. 1991; Walsh et al. 1998). Bland and Parker (1974) reported the proportion of patients on open wards who absconded more than doubled between 1968 and 1972 to 30%. Two studies from the same psychiatric hospital in India show a change from the majority of absconding patients coming from locked wards to the majority coming from open ones during the course of a decade (John et al. 1980; Mubarak Ali et al. 1989). A further two studies reported that a greater proportion of absconds were from closed wards (Dickens and Campbell, 2001; Kernodle, 1966). One study found no significant difference in absconding rates between open and locked wards (Ford et al. 1998) while another reported that around half of both male and female absconders had been in locked wards. Finally, a study of escapees from a psychiatric unit for offenders found that 89% were residing in one of the three strictest security wards (Morrow, 1969).

Repeated absconding

On the whole, event based measures were higher than patient based ones, indicative of some patients absconding more than once during the study period. This was confirmed by the common finding that a sub-group of patients had repeatedly absconded during the study period (NB: most studies did not clarify whether this occurred in a single admission episode). A number of studies explicitly examined the relationship between patient and event based rates in some detail, while others presented data which allows an average number of absconds to be calculated. The mean number of absconding episodes per absconding patient ranged from 1.06 for special hospitals (Huws and Shubsachs, 1993) to 1.12 (Siegel et al. 1982), 1.14 (Sommer, 1974), 1.15 (Dolan and Snowden, 1994; Kleis and Stout 1991), 1.23 (Yasini et al. 2009), 1.24 (Chandrasena, 1987), 1.35 (Chandrasena and Miller, 1988; Smith and Quaynor 1990), 1.48 (Farid 1991), 1.58 (Milner 1966), 1.64 (Walsh et al 1989), 1.69 (Dickens and Campbell, 2001), 1.71 (Antebi, 1967), 1.93 (Kernodle 1966), 1.99 (Molnar and Pinchoff 1993), 2.14 (Muller 1962), 2.31 (Falkowski et al. 1990), 2.44 (Short, 1995), 2.71 (Tomison, 1989), 2.85 (Bowers et al. 2000) and 2.95 (Meyer et al 1967). One Canadian study found little change in the mean number of absconding incidents between 1968 and 1972 (1.40 and 1.31 respectively; Bland and Parker1974). Similarly, a change from a closed to an open ward policy did not result in much change to the ratio between absconding patients and incidents: from 1.27 to 1.24 (Cancro 1968). Studies with a repeat absconding rate were grouped by country and door locking status (Figures 6 and 7).
The mean repeat absconding rate (shown in black) was marginally higher for studies from the UK than those from the USA, but both were higher than for mean rates for Canada and other countries. The distribution of scores for the UK and USA were also
similar. Despite the limited number of studies which specified locked door status, studies of open (or mainly open) wards reported a higher average repeat absconding rate than studies of locked (or mainly locked) wards. Studies of wards with a mix of open and locked wards showed reported a higher rate than those of locked wards, but a lower rate than open ward studies. The studies which did not state whether wards were open or closed had the same mean rate of repeated absconding than the mixed study wards. The scores for this category showed more similarity to the locked ward studies, suggesting that their exclusion from this analysis could have the greatest potential impact on average rates for open wards.

The literature also provides insight into the distribution of absconding events within studies. Chandrasena. and Miller (1988) found that 24% of AMA/AWOL patients accounted for 44% of incidents. Meyer et al (1967) found that 69% absconded more than once from an open psychiatric unit over the course of a year. Three studies reported that around half absconding patients absconded more than once: 50% (Muller 1962) 49% (Molnar and Pinchoff 1993), 46% (Short 1995). The percentage was considerably lower for most other studies: 43% (Kernodle, 1966), 34% (Dickens and Campbell, 2001), 37% (Tomison, 1989), 39% (Falkowski et al 1990), 31% (Meehan et al, 1999), 27% (Walsh et al 1989), 24% (Smith and Quaynor 1990), 13% (Kleis and Stout 1991),11% (Dolan and Snowden 1994) to 9% (Sommer, 1974).

Some studies reported more than one patient absconding in the same incident. At a US maximum security psychiatric hospital, where escapes were rare, the number of patients escaping exceeded the number of escape events because patients tended to escape in groups: there were 40 absconding patients and 15 incidents (Morrow, 1969). Similarly, three sets of patients attempted to escape in pairs from high security special hospitals in England over a five year period (Moore, 2000). Another UK study reported that on four occasions (5% of absconding incidents) two patients had absconded together (Dickens and Campbell, 2001). A study of seven absconders from a forensic hospital noted that two patients had absconded together (Nussbaum et al. 1994).

Although not frequently reported in the literature, a range of factors appear to differentiate repeat and single absconders. Repeat absconders were more likely to be compulsory detained at time of absconding from UK one acute psychiatric hospital (Short 1995). Another UK study found that three-quarters of repeat absconders were compulsory admitted under the Mental Health Act and that 64% were of Afro-Caribbean origin (Falkowski et al. 1990). Two further descriptive studies found a tendency for repeat absconders to be male patients aged between 18-29 and have a shorter length of stay (Kleis and Stout, 1991), or younger and to have been hospitalised for longer (Meyer et al. 1967). A study of AWOL/AMA patients found compared repeaters and single absconders and found the former (statistically) more likely to be aged 30-39 years than other age groups, have a primary diagnosis of schizophrenia or major affective disorder, be self-referring, to be treated with neuroleptics, and have prior admissions (Chandrasena and Miller, 1988). Repeaters were less likely to be diagnosed with depression or anxiety and to be employed. In contrast, two studies found no statistically significant relationship between repeated absconding and age, gender diagnosis legal status or length of stay (Molnar and Pinchoff, 1993; Muller, 1962).
Antecedents

Relatively few studies reported the events which preceded patients absconding and of those that did there was a preponderance of UK studies, particularly those from the high security estate (so called special hospitals). One concluded that it was not possible to establish the sequence of events preceding each absconding episode from the available documentation, although the overall impression was that patients’ attempts to abscond were impulsive and opportunistic (Smith and Quaynor, 1990). In contrast, Moore’s (2000) account of absconding from English high-security hospitals between 1989-94 is based upon inquiry reports written after each absconding episode and provides much more detail. Half (n=23) of the 45 patients in the sample were retrospectively classified as ‘opportunity-takers’. These patients took advantage of the reduced security outside the hospital while on escorted trips or chance events to make an absconding attempt. Some of these patients described repeated thoughts of absconding in the preceding weeks but acted only when an opportunity arose. There was evidence that patients had expressed difficulties in communicating anxieties to staff, considered themselves ready to leave hospital and were reluctant to participate in treatment options. Another group of patients were classified as ‘opportunity-makers’ (n=17) because there was evidence of planning prior to absconding. These patients tended to believe that they had a duty to abscond or had a specific objective to accomplish outside the hospital (e.g. demonstrating their ability to cope alone). Others had less specific reasons for absconding, other than a general feeling of dissatisfaction with being in the hospital. Another special hospital study found that recent deterioration in mental state and non-compliance with treatment plans (not medication) were observed more frequently in absconders, but did not predict absconding in a regression analysis (Brook et al. 1999). Patients acting out, a history of absconding and a previous ABH conviction were the factors associated with absconding.

A British study of 35 absconders found that treatment with injections did not generally precipitate absconding (Tomison, 1989). Reasons for absconding provided by nurses for patients absconding from acute admission wards included patients feeling that they did not need to be in hospital and factors outside hospitals such as missing friends and family or needing money (Short, 1995). Another used a combination of interviews and case note analysis to conclude that there was generally one main reason for absconding in the 210 instances reported (Muller 1962). The most frequent reasons were: treatment failure (50%), family trouble (17%), alcohol (12%), influence of other patients (8%) and money (4%). One study reported anecdotal evidence that absconding was linked to doctors’ failure to share a particular patient with rest of team (Cancro 1968). A case comparison study found that absconding was predicted by dynamic antisociality, psychiatric symptoms, poor compliance (escape attempts, breaking rules, coping skills) and medication compliance (Quinsey et al. 1997). Medication refusal in the previous 48 hours has also been identified as a predictor of absconding (Bowers et al. 2000). A regression analysis of official incident data found that absconding was associated with physical aggression, verbal aggression and hours of observation. Incidents deemed serious were associated with greater admissions and verbal aggression (Bowers et al. 2007). Only one study reported associations between absconding and other forms of conflict, as well as methods of containment (Bowers et al. 2003b). Absconding was associated with aggression against objects and others (‘angry absconders’) or
substance misuse (‘absconding misusers’). The former were subject to all forms of containment except intermittent observation, while the latter were only (negatively) associated with this form of containment. These inconsistent findings provide limited insight into the reasons why patients abscond. One lesson to be drawn from the literature is that official records are not an adequate source of data upon which to base conclusions about the antecedents of absconding incidents. A sense of treatment failure or that patients don’t want to be in hospital are not specific enough to understand why some patients actually act upon this general malaise. For example, are there very specific events which tip the balance in favour of a decision to leave the ward? Forensic studies seem to indicate that the way this decision is made varies, with more opportunistic absconders signalling their intention some time before the event. Similarly, a study in an acute setting found that over half (58%) of absconders expressed an intention to leave within 24 hours of leaving the ward (Bowers et al. 1999a).

Interviews with patients reveal a greater emphasis on domestic circumstances as a reason for leaving hospital without permission. A study of 221 absconding patients found the most frequent reason given involved family relationships and responsibilities (Kernodle 1966). This included concerns about care of family members (especially children), paying bills, returning to work and care of their homes. Some absconded because they were bored and felt they deserved a break from the hospital or did not like changes in medical staff. The study also reports occasional administrative confusion as to whether a patient was allowed to leave the hospital. Interviews with 52 absconding patients who returned to hospital suggest that fear of other patients, boredom, feeling cut-off or trapped and concern for their property/home were frequently reported (Bowers et al. 1999c). Whilst psychiatric symptoms were a factor, a quarter left in anger because of disputes over leave or discharge whilst others left in order to carry out a particular task outside the hospital. Data from the same study showed that absconders were more likely than controls to be confined to the ward (Bowers et al. 1999a). Interviews with nurses revealed doubts about the effectiveness of observation in preventing absconding (Clark et al. 1999). The most common suggestion for preventing absconding was more staff, but locking ward doors was generally not seen as desirable. Qualitative interviews with 14 patients identified the following broad reasons for absconding: boredom, lack of interesting activities/not wanting to participate, ward environment, questioning the need for hospitalisation, concerns about issues at home and gaining more staff attention (Meehan et al. 1999).

Yet another perspective is offered by nurses. Interviews with nurses reveal doubts about the effectiveness of observation in preventing absconding and the most common suggestion for preventing absconding was more staff, while locking ward doors was generally not seen as desirable (Clark et al. 1999). Nurses have reported verbal and non-verbal clues to possible absconding such as patients suggesting that they feel ready to go home, agitation, restlessness, irritability, and refusal to take medication (Richmond et al. 1991). The same study also reported a change in behaviour in those who eloped which usually involved an increase in psychotic symptoms. Although few in number these qualitative studies suggest ways which in which absconding incidents might be reduced, such as reviewing observation policies and acting earlier in response to certain patient behaviours. In particular, there is a
consistency across all data sources that patients who refuse medication and express a desire to go home are more likely to abscond.

**Circumstances**

Information was also available on the broader circumstances of absconding episodes. Moore’s (2000) study of high security hospitals provides a very detailed account. There were a total of 27 absconding incidents while outside the hospital (rehabilitation trip, hospital trip, compassionate leave, being escorted, or on an outside working party), 12 escapes and 4 failures to return from leave. Most opportunist absconders (described above) decided to run while escorting staff were either temporarily out of sight or were separated, such that the patient could run off with minimum resistance. Patients made use of crowded public places and some patients absconded just before entering or leaving vehicles that were transporting them. Patients classified as opportunity-makers climbed through small windows and scaled high walls which were not deemed risks to security at the time. Two patients had swallowed inedible objects which necessitated admission to hospital and then tried to evade staff while entering the ambulance. Another special hospital study found evidence of planning in 39% of escapes from hospital, but half were rated as impulsive (Huws and Shubsachs 1993). In this study, the chance of absconding outside the hospital on escorted rehabilitation trips was estimated as one in 1400. For patients on trial leave, there was evidence of planning in 30% of absconding cases, 13% were categorised as impulsive and the remainder were unclear.

Even when escorted outside hospital, therefore, patients are able to contrive or take advantage of lapses in security if they are determined to abscond. In particular, the use of windows as a means of leaving the ward, hospital or other location is described in several papers (Dolan and Snowden 1994; Enser and MacInnes 1999; Nussbaum et al. 1994; Smith and Quaynor 1990). A special hospital study describes patients escaping from a garden or during hospital transport between sites (Brook et al. 1999). Absconding during outings included (in order of prevalence) community rehab trips, trips to court/hospital/prison, hostels/community placements. Patients are also reported to have climbed over security fencing or walls (Dolan and Snowden 1994; Enser and MacInnes 1999; Smith and Quaynor 1990), although higher fences reduce the levels of absconding (Enser and MacInnes 1999).

In non-forensic settings, absconding tended to involve patients leaving unlocked wards or when patients were on agreed, temporary leave from the ward or hospital. Breaching security measures was rare. For example, of the 148 absconding incidents described in one study, 38% involved patients from unlocked wards where patients walked off the ward or were found to be missing after signing out (Dickens and Campbell 2001). Of the patients on locked wards, a third were on agreed leave and then failed to return, 12% left staff escorts without permission and only 6% breached the physical security of the ward/hospital. Other incidents included absconding from a home visit, from therapy sessions off the ward and from the care of a relative within the grounds. Other studies reported the proportion of absconding patients with some kind of permission to leave the ward as 17% (Bowers et al. 1999a), 38% (Dewar, 1961), 45% (Kleis and Stout 1991) and 93% (Molnar and Pinchoff 1993). In contrast, a study of open wards found that all of a sample of 40 patients absconded from the wards, and only six absconded from a ward other than their own (Tomison, 1989).
An Iranian study reported that 37% of absconders left via the principle gate at the hospital, 35% though other means (windows, walls etc.) and the remainder were unknown (Yasini et al. 2009). Two studies found evidence of visitors colluding in absconding events (Kernodle 1966; Molnar et al. 1985). Clearly, agreed leave presents an opportunity for patients to abscond if they are determined to do so, although the time patients spend outside the hospital is usually very short (see below). The papers did not indicate what kinds of risk assessment procedures were in place to minimise this risk, but the evidence indicates that these could be strengthened.

Outcomes

Destinations
Once patients leave the ward, some go no further than the hospital grounds or are apprehended before they can travel further. If patients managed to leave the hospital grounds, they headed for a variety of destinations. Consistent with worries about domestic issues as a major motivation for absconding (as reported above), one of the most the most common was the patient’s home (Kernodle, 1966; Lal et al. 1977; Farragher et al. 1996; Farid 19991; Dewar 1961). A study of 35 absconders from a UK psychiatric hospital found that 11 went to the immediate environs of the hospital, 9 went home, 3 returned from unknown destinations and 9 returned from various locations in and around city (Tomison 1989). Similarly, Short (1995) reports that about a third of absconders from acute admission wards went home or to friends or family, 29% went to various destinations in the city, 12% stayed within hospital grounds and 9% headed out of county. Falkowski et al (1990) found that nearly half of absconders went home, 19% went to another specific place and 16% wandered aimlessly. Milner (1966) reported that 28% of absconding patients found themselves in potentially dangerous situations, including attempted suicide or aggression towards relatives, wandering at large with no apparent concern for themselves or their surroundings or leaving the district. Interviews with 52 absconding patients showed that 63% went home after absconding and largely engaged in normal activities while away. A third went to family/friends' house and very few had no destination in mind (Bowers et al. 1999a). This section of absconding patients who leave hospital only to find themselves with not apparent place to go is alluded to in other studies in terms of seemingly non-specific locations where they were found, but their motivation (or lack of it) is not specified.

There is some evidence that patients used their time out of the hospital to consume alcohol and other substances. Moore (2000) describes opportunistic absconders from high security hospitals reports that carrying money often led patients to visit one or more pubs and drink to intoxication. Another study found the public house to be the most frequent destination: over a quarter of absconding patients went there compared to 13% going home and 13% to a friends’ some (Walsh et al. 1998). The results of this study should be treated with some caution as the destination could not be confirmed in 41% of cases. However another found that alcohol use was documented in 28% of absconding incidents (Dickens and Campbell 2001). This is consistent with Bowers et al. (1999a) who reported that a fifth of absconding patients drank alcohol and 11% smoked cannabis whilst away.

Organisational
The consequences of absconding for the organisation of the ward and management of individual patients were also recorded by some studies. Two from Ireland describe a range of changes to the management of patients who return from absconding. In one, 25 of 31 returning patients were interviewed by a doctor within a day (Farragher et al. 1996). Three of these patients were discharged and there was a change in management policy in the case of 10 patients. Four were denied permission to leave the ward unaccompanied, four were transferred to a secure unit and two were changed from a voluntary to an involuntary status. The other study, of 95 absconding patients, found that 2% were transferred to general medical hospital for treatment on their return, 16% had their medication changed, 15% were transferred to a secure ward and the legal status of 7% was changed from informal to formal (Walsh et al. 1998).

Changes in management have may be more common for patients returned to hospital by the police (Falkowski et al. 1990). Other studies have also reported changes to medication (McIndoe, 1986), reduced privileges (McIndoe 1986) and transfer to other (more secure) units (Falkowski et al. 1990; Meehan et al. 1999). Interviews with returning patients in a US psychiatric hospital found that patients felt hostility and objected to placement on locked wards with disturbed patients (Kernodle 1966). Some felt that their return was not necessary because they were making adequate adjustment at home and expressed resentment at being transferred away from patient friends and familiar staff without being given chance to explain their reasons for escape. For example, 20 patients indicated they would leave again at the earliest opportunity, but would not have considered this if they had been returned to their original ward. Nevertheless, on returning, 80% of absconding patients were placed on a locked ward. Transferring absconders to locked wards is more likely if patients had absconded previously (Falkowski et al. 1990).

Harm to patient and others
Several papers detail harms which came to patients after they had absconded. This included patients overdosing (Bland and Parker, 1974; Molnar et al. 1985; Walsh et al. 1998), attempted suicide (Bowers et al. 1999b; Falkowski et al. 1990; Lewis and Kohl, 1962; Meehan et al. 1999; Milner, 1966), self-harm (Bowers et al. 1999b; Dickens and Campbell, 2001; Walsh et al. 1998) and suicide (Kernodle, 1966). A small number of other (non-suicide) deaths were also recorded (Aspinall, 1993; Bland and Parker, 1974; Kernodle, 1966; Tomison, 1989). One study reported that a very small number of patients were victims of assault (Dickens and Campbell, 2001) while two found that evidence of aggression towards others (Bowers et al. 1999b; Milner, 1966).

Duration
There was a consensus among the studies that absconding patients are usually missing for relatively short periods of time. The most commonly reported duration was one day or less. Fourteen studies reported that over half of patients absconding from hospital had returned to hospital during this time (Antebi, 1967; Bowers et al. 1999a; Brook et al. 1999; Cancro, 1968; Dewar, 1961; Dickens and Campbell, 2001; Farid, 1991; Huws and Shubsachs, 1993; Molnar et al. 1985; Molnar and Pinchoff, 1993; Muller, 1962; Smith and Quaynor, 1990; Tomison, 1989; Walsh et al. 1998). The mean duration of absence in one study was 23 hours (Falkowski et al 1990), while a study of special hospital patients found that it took longer for patients who absconded while on leave to return or be returned, with only 37% returned or retaken in 1 day.
(Huws and Shubsachs, 1993). Bland and Parker (1974) found that just less than half of elopements from a Canadian psychiatric hospital were returned within 12 hours.

A small proportion of patients remain absent without leave for much longer periods. Around 10% of special hospital patients still absent after a month (Huws and Shubsachs, 1993). The maximum period ranged from 31 days (Muller, 1962), 55 days (Molnar and Pinchoff, 1993), 60 days (Dewar, 1961), 11 months (Brook et al. 1999) and 12 months (Kernodle, 1966; Morrow, 1969). In one study, 18% had not returned after 6 month follow-up (Sommer, 1974) and in another 35% of absconders had not returned during the two month study period (Farragher et al 1996). A US study of absconding patients over several years reported than an average of 13% did not return to hospital (Cancro 1968). A study of absconds from a hospital in Ireland reported a similar proportion of patients who did not return (10%; Falkowski et al 1990).

The status of non-returners was not elaborated on (because they had not been followed-up), but other papers report absconding patients being discharged in their absence. Ranging from 3% (Dickens and Campbell, 2001) to 5% (Short 1995), 6% (Farragher et al. 1996), 7% (Farid, 1991), 8% (Molnar and Pinchoff, 1993), 12% (Meyer et al. 1967), 20% (Muller 1962), 26% (Mandlebrote and Freeman, 1963) to 49% in one hospital where patients were automatically discharged if they had not returned by midnight on the day of absconding (Molnar et al. 1985) and 53% in an Australian acute inpatient unit (Meehan et al. 1999). The highest rate was 67% for patients admitted as part of a prison diversion scheme (Joseph and Potter, 1993). One study did not provide a precise figure but it is clear that the number of absconding patients discharged was small (Bowers et al. 1999a). Of the 498 absconding events, 9% of patients failed to return of whom two were still missing while the rest were placed on leave or discharged. Another reported that around a fifth of absconding patients were discharged (Bland and Parker 1974).

**Offending**

Offending behaviour was reported for some absconding patients. Among 66 absconding special hospital patients one study found that 17 had re-offended (Huws and Shubsachs 1993). Another special hospital study found that 11% of absconding patients offended while at liberty (theft, affray, threatening behaviour and assault; Brook et al. 1999), while two personality disorder patients offended from a sample of 17 absconders from a regional secure unit (Smith and Quaynor 1990). One other forensic study reported a rate of 11% (Dolan and Snowden 1994). Rates of offending were lower among absconders from non-forensic settings. The proportion of absconding patients who offended ranged from 2% (Meehan et al. 1999; Short 1995), 3% (Bland and Parker 1974), 7% (Walsh et al. 1998) to 11% (Kernodle 1966).

Around half of offences committed were serious. A study of UK independent hospital found that four out of the 6 criminal offences recorded involved actual or potential violence and/or aggression, including criminal damage and possession of a weapon (Dickens and Campbell, 2001), armed robbery (Dolan and Snowden 1994; Bland and Parker 1974), car theft (Smith and Quaynor 1990; Bland and Parker 1974) and violence (Smith and Quaynor 1990; Bland and Parker 1974) were also reported.
Characteristics of absconding patients

Age

There was a widespread consensus that absconding was more common among younger patients, which was generally defined as patients under 40 years old. Simple reports of the mean age of absconders ranged from 22 (Meyer et al. 1967), 27 (Molnar et al. 1985), 32 (Yasini et al. 2009), 38 (Quinsey et al. 1997). Other classified patients into age groups. One very large study of over 50,000 inpatient admissions across 10 institutions found that the highest rate of absconding was for patients aged 15-19 and fell with increasing age (Altman et al. 1972). Two studies found 66% and 74% of absconders respectively to be under 40 years old (Andoh, 1999; Meehan et al. 1999), while another found three-quarters to be aged between 21 and 30 (Lal et al. 1977). A Canadian study reported that 44% of absconders were between 20-29 years (Chandrasena and Miller, 1988). Others have found over half of absconders to be under 40 years old (Lewis and Kohl, 1962; Mubarak Ali et al. 1989).

Several studies compared the characteristics of absconders to the remainder of the patients selected for the research. Morrow (1969) reported that 70% of escapees from a maximum security unit for offenders were under 25 compared to 41% non-escapees and that this difference was statistically significant. One Indian study found that the likelihood of absconding to be significantly greater among patients under 30 (John et al. 1980). One study found absconders more likely to be under 35 years old (Molnar and Pinchoff, 1993; Sommer, 1974), while another found an interaction between age and gender with males under age of 35 having the highest elopement rate (Molnar and Pinchoff, 1993). Kernodle (1966) reported a tendency for younger patients to abscond, with those aged 20-44 representing a fifth of the total hospital population but 61% of patients taking non-medical leave (this relationship was not assessed statistically). The average age of absconders from a high security hospital was 36 years compared to 47 for non-absconders (Moore and Hammond, 2000). One study found patients absent without leave to be significantly younger than those discharged against medical advice or regular discharges (Atkinson, 1971). Patients absconding from a US dual diagnosis unit have been found to be significantly younger than regularly discharged patients (Greenberg et al., 1994).

A follow-up study found absconding patients to be younger than the total hospital population both before and after transferring from locked to open wards, although these results were not assessed statistically (Cancro, 1968). The results of this study also suggest that the age of the hospital population and absconders had decreased over time. Another study also found the proportion of absconders under 30 years to increase over time (54% in 1968 and 67% in 1972; Bland and Parker (1974). Some studies compared the characteristics of absconders to patients from the non-absconding hospital population and also showed absconders to be significantly younger (Brook et al. 1999; Short, 1995). One of the few studies to conduct any multivariate analysis found being aged 35 and under was a significant predictor of absconding (Bowers et al., 2000). Although the balance of evidence suggests that absconding patients are younger, some studies found no statistical association between age and absconding (Farragher et al. 1996; Nicholson et al. 1991; Raynes
and Patch, 1971; Smith and Quaynor, 1990). Therefore, the trend for younger patients to abscond apparent in the descriptive data are supported by studies which applied more rigorous designs and analysis.

**Gender**

From descriptive data, there was an overwhelming consensus that absconders are predominantly male (Andoh, 1999; Antebi, 1967; Chandrasena and Miller, 1988; Dewar, 1961; Falkowski et al. 1990; Huws and Shubsachs, 1993; Kernodle, 1966; Kleis and Stout, 1991; Lal et al. 1977; Molnar et al. 1985; Molnar and Pinchoff, 1993; Moore, 2000; Mubarak Ali et al. 1989; Muller, 1962; Sommer, 1974; Tomison, 1989). In contrast, only three papers reported more females absconding (Farid, 1991; Lewis and Kohl, 1962; Walsh et al. 1998). However, the predominance of men among absconders reflects the typical population of psychiatric hospitals. Two studies where more females absconded also reported that females comprised the majority of admissions (Farid, 1991; Lewis and Kohl, 1962). Few studies used statistical tests to assess whether men or women were over-represented in absconding samples. An Indian study reported significantly higher absconding rates in males (John et al., 1980). A further two studies found males to be significantly more likely to abscond than females (Altman et al. 1972; Bowers et al. 2000). A lack of statistical association between gender and absconding was reported by three studies (Glick et al., 1981; Dickens and Campbell 2001; Raynes and Patch, 1971). Gender was not significantly different from patients classified as absent without leave, left against medical advice or a regular discharge (Atkinson, 1971). Two studies found evidence male or female over-representation over time, but did not analyses these results statistically (Bland and Parker, 1974; Cancro, 1968).

Gender differences were less evidence for studies comparing absconding patients to non-absconding controls. Five such studies found no statistically significant differences by gender (Short, 1995; Moore and Hammond 2000; Meyer et al. 1967; Farragher et al. 1996; Brook et al. 1999). Three studies (two from UK secure units), found a greater representation of males in the absconding group (Smith and Quaynor, 1990; Dolan and Snowden, 1994; Bowers et al. 2000). On balance, it seems likely that there is an association between gender and absconding, with males more likely than females to abscond, but these more rigorous studies indicate that the effect may be weaker than for other factors.

**Ethnicity**

On the whole the evidence suggests that there are not systematic differences in absconding by ethnic origin. Where examined, a majority of studies did not find statistically significant differences between ethnic groups (Chandrasena 1988; Moore and Hammond, 2000; Meyer et al. 1967; Greenberg et al. 1994; Dickens and Campbell 2001; Nicholson et al. 1991; Atkinson 1971; Brook et al. 1999). Where differences were observed, the direction of effect was inconsistent. Studies found absconders significantly more likely than other patients to be black (Raynes and Patch, 1971; Sommer 1974 (Altman et al. 1972)), Afro-Caribbean (Dolan and
Snowdon, 1994), from an ethnic minority (Bowers et al. 2000) or white (Coleman 1966). One study reported a significant interaction between ethnicity and legal status among absconding patients, with all Afro-Caribbean absconders being formally detained (Falkowski et al. 1990).

Some religious differences were also reported. In particular, catholics were found to be over-represented among absconding patients (Altman et al. 1972; Coleman, 1966; Sommer, 1974). Bowers et al. (2000) found absconders more likely to be non-Christian, while an Indian study found no significant difference between psychiatric and medical absconders (Lal et al. 1977).

**Diagnosis**

This relationship was difficult to assess because of the use of different terminology and diagnostic systems between studies. Schizophrenia and personality disorder (PD) were the most commonly reported diagnoses among absconding patients. More descriptive studies found schizophrenia to be the most frequent diagnosis (Richmond et al. 1991; Bland and Parker 1974; Lal et al. 1977; Dolan and Snowden 1994; Smith and Quaynor 1990; Lewis and Kohl 1962; Antebi 1967; Molnar et al. 1985; Muller, 1962; Chandrasena and Miller 1988; Mandelbrote and Freeman 1963; Dewar 1961; Meehan et al. 1999; Sommer 1974; Falkowski et al. 1990) than personality disorder (Greenberg et al. 1994; Moore and Hammond, 2000). A few studies found other diagnoses to be particularly prevalent among absconders. A forensic study reported absconders to be agitated, anxious, paranoid and experiencing prepsychotic or psychotic symptomology (Cooke and Thorwarth, 1978). Another study found the majority of absconders to be diagnosed with affective disorders, but acknowledged that this reflected the large overall proportion of this category of admissions (Kleis and Stout 1991). Finally, a UK study reported that the most common diagnosis for absconding patients was manic depression, followed by schizophrenia, PD and drug induced psychosis (Farid 1991).

Statistical associations were found between absconding and PD (Altman et al. 1972; Atkinson 1971; Nussbaum et al. 1994; Walsh et al. 1998) and schizophrenia (Walsh et al. 1998). Bowers et al. (2000) found absconders more likely to be diagnosed schizophrenia than non-absconders, after controlling for the influence of other patient characteristics. One study found diagnoses of depression and substance abuse to be more likely to be discharged AWOL, although this study included patients from a substance abuse treatment unit (Miller et al. 1983). Other diagnoses have also been identified as higher among absconding patients. Compared to non-absconders, Raynes and Patch (1971) found absconding patients more likely to be diagnosed with alcoholism (36% vs 10%) and drug addiction (28% vs 3%). A study of absconding from Special Hospitals found a higher proportion of absconders with a psychopathic disorder and fewer with a diagnosis of mental illness compared to non-absconding patients (Huws and Shubsachs 1993). A UK study of acute admission wards found affective disorders to be the most prevalent diagnosis among of absconders (32%) followed by PD (19%) and schizophrenia (16%), but this was not significantly different to non-absconding patients (Short 1995). Absconders from an Indian hospital were significantly more likely to be diagnosed with mania or schizophrenics than non-escapees (John et al. 1980).
The most convincing results come from case-control studies. These studies point to psychosis as likely diagnostic factor associated with absconding. A study which matched absconders to a random sample of non-absconders on the basis of age, sex and ethnicity found a significantly higher incidence of psychotic disorders among absconders (60% compared to 36%; Meyer et al. 1967). In a forensic setting, patients who absconded were significantly more likely to be diagnosed as psychotic than patients who re-offended while under supervision (Quinsey et al. 1997). In contrast, another study found absconders less likely to be psychotic and significantly more likely to be diagnosed as malingering (Gacono et al. 1997). Compared to sex-matched controls, one study found associations between diagnosis and absconding for female patients only, with both schizophrenia and PD significantly overrepresented in the absconding group (Tomison 1989). Bowers et al. (2000) found absconders more likely to be diagnosed schizophrenia than non-absconders, after controlling for the influence of other patient characteristics. A history of alcohol abuse (but not drugs) has also been associated with absconding (Andoh, 1999). Other studies have found no significant differences in diagnosis between absconders and non-absconding patients (Farragher et al. 1996; Glick et al. 1981; Nicholson et al. 1991; Brook et al. 1999; Gangadhar et al. 1981; Yasini et al. 2009). Comparison of absconders to a matched control group (age, sex, time of discharge) found no significant diagnostic differences (Milner 1966).

**Legal**

*Criminal history*

Criminal history or activity was not always defined precisely, so could include arrests, convictions, legal involvement on admission or other measures of criminality. These very different measures make comparisons between studies difficult. Nevertheless, the proportion of non-forensic absconding patients with a criminal history ranged from 27% (Greenberg et al. 1994), 29% (Chandrasena and Miller 1988) and 39% (Antebi 1967). One study found that 51% of absconders had been arrested more than once, and that this was significantly higher than for non-elopers (Coleman 1966). A matched case control study found no significant difference between absconding (AWOL or AMA) patients and controls (Chandrasena and Miller 1988). However, a related study did find a difference for patients discharged against medical advice but not for those AWOL (Chandrasena 1987). No difference between absconders and a non-matched comparison group has also been reported (Greenberg et al. 1994).

As the majority of admissions to forensic hospitals are via the criminal justice system (Brook et al. 1999; Dolan and Snowden 1994) the interest here is the nature of previous offending among absconding patients and whether this differs from non-absconding patients. Violence was the most common index offence category among absconders (47%), followed by sexual offences, arson and homicide (Brook et al. 1999). However, the offence profile of absconders was not significantly different from other patients. Another special hospital study also found no difference in offence profile between hospital absconders and other patients, but patients who absconded while on trial leave were significantly more likely to have a property related index offence (Huws and Shubsachs, 1993). A US study reported the majority of offenders had been charged with violent offences at admission, but so too had other
patients and differences with other patient groups were not subject to statistical tests (Quinsey et al. 1997). On the other hand, absconders from a regional secure unit found that 96% were admitted via the criminal justice system compared to 58% of non-absconders (statistically significant; (Dolan and Snowdon, 1994). Again, property offences accounted for the majority of index offences, as well as previous convictions (although most also had a history of violence against the person). Abscondees from a court diversion programme were reported to have a higher number of previous arrests, although precise figures and statistical tests are not presented (Nicholson et al. 1991).

**MHA status/formal admissions**

Purely descriptive studies presented a mixed picture, with the proportion of absconders classified as involuntary ranging from 20% (Muller, 1962), 30% (Antebi, 1967), 45% (Swindall and Molnar, 1985), 57% (Richmond et al. 1991), 62% (in 1968) and 68% (1972; Bland and Parker 1974), 78% (Meehan et al. 1999). Two studies reported the legal status of patients at the time they absconded. One found 29% of men and 36% for women on a section at time of absconding (Farid 1991) and the other that 70% of patients were subject of a section of MHA at time they absconded (Falkowski et al. 1990).

The predominance of involuntary patients among absconders is confirmed by the majority of comparative studies. These reported that absconders were significantly more likely to be compulsory admissions than non-absconding patients (Andoh, 1999; Dickens and Campbell, 2001; Falkowski et al. 1990; Farragher et al. 1996; Molnar et al. 1985; Neilson et al. 1996; Short, 1995; Tomison, 1989; Walsh et al. 1998). However, one study found a significantly higher proportion of absconders to be voluntary patients (Chandrasena and Miller, 1988), although this study combined AMA and AWOL patients. Three others found no significant difference between absconders and other patients (Greenberg et al. 1994; Milner, 1966; Sommer, 1974). Bowers et al. (2000) also failed to find an association between compulsory detention and absconding, and suggest that correlations reported by previous studies may be explained by an increased likelihood of absconding being officially reported if the patient is detained.

A study from a medium secure unit reported variations in the section of the Mental Health Act (1983) under which patients were detained (Dolan and Snowdon, 1994). Absconders were significantly more likely than non-absconding patients to be detained under sections 47 and 48. Under half of absconding patients in a Special Hospital were detained under a legal category of mental illness in the Mental Health Act, but this was not significantly different to other patients (Brook et al. 1999).

**Length of stay**

Data on length of stay vary according to the nature of the ward/hospital and the characteristics of patients: average length of stay for all patients was considerably longer in some services compared to others. Comparing absolute figures on average duration of stay for absconders is therefore not meaningful. However, in most cases the studies indicated that patients tend to abscond relatively early on during their
admission. For example, approximately a third of absconders from an 80 bed ward in the USA occurred in first 3 days of admission (Molnar et al. 1985). A similar proportion absconded from an Irish hospital within the first week (Farragher et al. 1996). Another study reported 49% of absconders leaving within 7 days and 14% on day of admission (Meehan et al. 1999). A prospective study of 530 admissions to acute wards found that 75% of absconding events occurred within the first 3 weeks of admission, with the remainder occurring sporadically over subsequent months (Short 1995). One study found length of stay for AWOL patients to be similar to patients regularly discharged. However, AMA patients were significantly more likely to have a shorter stay, with a large proportion of these patients leaving within the first 10 days (Atkinson 1971). The proportion of absconders leaving within the first two weeks of admission ranged from 39% (Milner, 1966), 49% (Yasini et al. 2009), 50% (Tomison 1989), 51% (Lal et al. 1977), 57% (Sommer, 1974) to 66% (Bowers et al. 1999a). Length of stay also emerged as a predictor of absconding, with patients admitted for less than 8 days significantly more likely than longer stay patients to abscond (Miller et al. 1983). Longer periods were reported by a few studies. Over three-quarters of absconders left within a year in one study (Bland and Parker 1974) and in another 83% had a length of stay of 30 days or more and over half had been in hospital for more than 90 days (Molnar and Pinchoff, 1993).

Few studies reported length of stay as a mean, but means for absconding patients were reported as 12 days (Chandrasena and Miller 1988) and 21 days (Kleis and Stout, 1991). Patients discharged AMA from a dual diagnosis unit had a very short average length of stay (9.5 days). Overall, irregular discharge patients had a significantly shorter length of stay than regular discharge patients (18.8 vs 51.4 days)(Greenberg et al. 1994). A mean duration of stay of 12 days on locked wards and 16 days on open wards was reported by one study, although the difference between them was not assessed statistically (Mubarak Ali et al. 1989).

One study found no statistical relationship between length of stay and whether patients absconded from a locked or open ward (John et al. 1980). Patients returning within a week from absconding were had been in hospital a similar amount of time than other absconders (Gangadhar et al. 1981). A UK study found a higher proportion of male absconders leaving within a week (49%) compared to females (24%), although this difference was not assessed statistically (Farid, 1991).

Although the length of stay for absconding forensic patients was longer, patients absconding from a special hospital had significantly shorter duration of stay (mean=62 months) than controls (mean=97 months; Brook et al. 1999). Another reported variation according to whether patients escaped from the hospital or absconded outside the hospital (Moore 2000). The mean length for the former was 43 months, compared to 84 months for the latter group. One study suggested a difference by method of escape, with all but one patient who absconded by climbing a fence having been admitted within previous two months, but those absconding while on parole spending an average of 10 months in the clinic before absconding (Smith and Quaynor 1990). Two studies reported that at least 50% of absconding incidents occurred within six months of admission (Dolan and Snowdon, 1994; Morrow, 1969), with the former reporting a mean length of stay for absconders of 63 days. A study of absconding over a 13 year period found that patients absconding directly from the
hospital had a significantly lower length of stay than controls, but there was no significant effect for those who absconded while on leave (Huws and Shubsachs, 1993).

**Absconding history**
Absconders are significantly more likely than matched (Coleman 1966) and unmatched (Dolan and Snowden 1994) controls to have eloped previously. In one forensic study a logistic regression analysis showed that a history of multiple absconding was the strongest predictor of absconding from a special hospital (Brook et al. 1999). A study of acute wards identified absconding on a previous admission as the strongest predictor of absconding (Bowers et al. 2000). Previous absconding was significantly more likely among patients discharged AMA or AWOL than matched controls (Chandrasena 1987).

**Employment and other**
Fewer studies examined employment, accommodation or marital status as factors which may be associated with absconding. Of those that did, absconders were usually found to be more likely to be unemployed (Andoh 1999; Bowers et al. 2000; Milner 1966; Morrow 1969; Short 1995). The picture for marital status was more mixed. No significant difference between absconders and non-absconders in marital status was reported by five studies (Brook et al. 1999; Milner 1966; Raynes and Patch 1971; Sommer 1974; Tomison 1989). However, single patients had the highest rate of absconding in four studies (Altman et al. 1972; Farragher et al. 1996; Lal et al. 1977; Yasini et al. 2009) and patients married or living with partner were significantly less likely to abscond in another (Dickens and Campbell, 2001). One study found divorced and separated patients to be overrepresented among absconders, but did not conduct statistical tests (Kernodle 1966).

One study reported that a quarter of male absconders and one in ten females are of no fixed abode (Antebi 1967), but another found no statistical association between type of accommodation (including NFA) and absconding (Short 1995). Differences by discharge type were also reported. There was no statistically significant difference between AWOL/AMA patients and control group for marriage status, homelessness, employment status or education (Chadresena and Miller 1988). However, when compared to controls AWOL patients more likely to be of no fixed abode and unemployed while AWOL patients were more likely than AMAs to be unmarried (Chadresena 1987). One other study also found no differences between AMA/AWOL cases and regular discharges for these patient characteristics (Greenberg et al. 1994).

**Temporal ecology**
Four studies refer to absconds occurring in clusters, indicative of some form of contagion effect (Cancro, 1968; Dolan and Snowdon, 1994; Meyer et al. 1967; Weaver et al. 1978), but the majority of evidence on the timing of absconding events concerns more general temporal patterns.

**Time of day**
Most studies which address the timing of absconding events suggest that patients tend not to abscond in the morning: of the 14 studies providing relevant data, only two
reported a preponderance of absconding in the morning hours. Beyond this, there did not appear to be a common pattern to the timing of absconds, probably reflecting variations in the organisation of shifts between hospitals, settings and countries. However, it is possible to conclude that absconds tend to occur sometime between midday and 11pm (Bowers et al. 1999a; Dickens and Campbell 2001; Molnar et al. 1985; Morrow 1969; Richmond et al. 1991; Short 1995; Walsh et al. 1998). One study provided a more precise peak time of between 8 and 9pm (Cancro 1968). A few studies did buck the trend, with one identifying the early morning as a high risk period (between 7 and 11am; Meehan et al. 1999) and others finding no pattern in the time of absconding (Nussbaum et al. 1994; Tomison, 1989).

There is evidence of the timing of absconds corresponding to shift changes, with one study reporting that most absconds occurred in middle of day, but also two peaks at 13:00 and 21:00 which were the shift change times (Bowers et al. 1999a). Another found that elopements clustered around change of shift and dinner hours and between 9-10am when staff were on patient rounds (Swindall and Molnar 1985). The association between time of day and staffing level was not clear from the available literature. Molnar et al. (1985) reported that peak time of elopements was between 1-2pm but this did not coincide with lowest staffing level. On the other hand a study of psychiatric offenders found the majority of absconds to occur between 3 and 11pm when professional staff were generally absent and off-ward activities at a minimum (Morrow 1969).

**Time of week**

Of the studies which examined within week patterns of absconding, the majority reported a tendency for absconding to occur during the weekends (Dolan and Snowden 1994; Sommer, 1974) and on Saturday in particular (Bowers et al. 1999a; Cancro, 1968; Dewar 1961; Kernodle 1966; Swindall and Molnar 1985). Three studies noted risk of absconding to be lower on Sunday (Bowers et al. 1999a; Cancro, 1968; Kernodle 1966). The latter concluded that this was because family members are home on weekends, medically permitted departures for some patients can affect patients who don't have this and it can motivate them to leave, and there are less staff at the weekend. Patients interviewed indicated weekends were loneliest times at hospital and there was a lack of attention. Two studies, including a study of a dual diagnosis unit, found no particular daily pattern (Dickens and Campbell, 2001; Greenberg et al. 1994), while two Irish studies reported higher during the week compared to the weekend (Farragher et al. 1996; Walsh et al. 1998). A further study found absconding to occur most frequently Monday and Tuesday (Kleis and Stout 1991).

**Time of year**

There was a clear consensus that absconding was more common during warmer months of the year and/or much less frequent during winter (Altman et al. 1972; Antebi 1967; Bland and Parker 1974; Cancro 1968; Coleman 1966; Dewar 1961; Dickens and Campbell, 2001; Kernodle 1966; Kleis and Stout, 1991; Molnar and Pinchoff 1993; Molnar et al. 1985; Morrow 1969; Swindall and Molnar, 1985; Walsh et al. 1998). Only one study reported higher incidences of absconding during the winter months (Muller 1962). One study reported no pattern (Greenberg et al. 1994), while another found AMA discharges to be higher in the summer but no pattern for those absent without leave (Atkinson 1971).
Staff and patient experiences

Very limited information was available on patient or staff experiences of absconding. Qualitative data concerning patients’ reasons for absconding are discussed in detail above, but stress negative feelings associated with admission and concern about the safety of their home (Bowers et al. 1999c). Among patients returning to the ward voluntarily, many reported feeling under pressure from others (police, friends and family) or had nowhere else to go (Bowers et al. 1999b). Physical difficulties such as hunger, feeling unwell and in need of medication were also reported. Male involuntary patients were most likely to be returned by police and to be less happy about returning to the ward. The largest sample of patient interviews was from a US study of 160 returning patients which reported the most common reactions as hostility, objections to being in a locked ward with disturbed patients, feeling that they were being punished, feeling that they did not need to be in hospital and resentment at not having the opportunity to explain fully why they had absconded (Kernodle, 1966). Nearly half of patients from a UK study reported being angry or unhappy about being back in hospital, while 12% were relieved to have returned (particularly if they had returned themselves; (Falkowski et al. 1990). A study of five patients reported a consistent view that absconding was a positive event and that each patient would abscond again under similar circumstances (McKindoe 1986). As with other studies there was evidence that patients enjoyed normal or mundane activities after absconding. There was a tendency for patients to view their admission as unnecessary, to question their need for treatment and the role of nurses.

Fewer studies concerned staff perspectives on absconding. Interviews with 25 UK nurses revealed that the majority were worried or concerned when patients absconded and equally relieved when patients returned (Clark et al. 1999). The nurse observing the patient was most frequently blamed for a patient absconding and a minority mentioned a punitive reaction from hospital management following an absconding incident. Agency staff were strongly felt to have a negative impact on absconding as well as insufficient numbers of staff. Another paper from the same study also indicated that staff were very aware of the consequences of absconding and would consider contacting the police to protect themselves from allegations of taking insufficient action, rather than because they felt that the police would be effective (Bowers et al. 1999b). One early study reported little agreement among staff as to whether absconding was indicative of patients’ general condition or symptoms (Dewar, 1961). On the other hand, staff did agree that patients on leave were not more likely to abscond than others, although hospital statistics indicated that this was in fact the case.

Interventions

A previous review concluded that the available studies of interventions to reduce absconding “…are generally methodologically weak and badly described. There is little that can be concluded from them with great confidence” (Bowers et al., 1998, p.350). These comments reflect the reliance on a simple before and after design, with a lack of control groups and limited follow-up periods. Only three further studies could be identified from the subsequent ten years of published research. Whilst better papers, the overall very low number of available studies still means that it is difficult
to draw firm conclusions from them. Details of the nine intervention studies are shown in Table 3 (adapted from the Bowers *et al.* 1998 paper).

Two studies (Cancro 1968, Molnar *et al.* 1985) examined the impact of decreasing security by unlocking ward doors, and both found that the rate of absconding increased. However, in the latter study the introduction of other measures specifically intended to reduce absconding resulted in a subsequent decrease in absconding rates. A further two studies evaluated the introduction of groups to wards and indicated positive results (Battle and Zwier, 1973; Maratos and Kennedy, 1974). However, both suffer from methodological limitations: the former study had only a very small sample, and the latter was confounded by the researcher moving from one ward to the other at nearly the same time as the conditions crossed over. Richmond *et al.* (1991) describe a range of measures to reduce absconding on a ward and comparing absconding rates with other wards. The design appears to have lacked randomisation, and the data provided is scant and hard to interpret. Nevertheless a demonstrable effect was shown, although it is impossible to know which of the elements of the combined intervention were significant. Another study reported a significant decrease in absconding after introducing changes to admission wards intended as an alternative to conventional inpatient care (Gudeman *et al.* 1985). Patients were initially admitted to a day hospital, and were referred on to an intensive care unit or temporary residential facility as required. Although the study was uncontrolled, it took place over a four year period, probably ruling out short-term experimental effect as a cause of the improvement.
<table>
<thead>
<tr>
<th>Study</th>
<th>Design</th>
<th>Sample</th>
<th>Intervention</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Battle and Zweier (1973)</td>
<td>Prospective time-sample, ABA, 10 weeks for each phase</td>
<td>Non random sample of 8 men who had absconded at least three times since admission</td>
<td>Twice weekly group psychotherapy (client-centred).</td>
<td>50% lower rate of absconding during treatment periods (P&lt;0.05 by chi square)</td>
</tr>
<tr>
<td>Bowers et al. (2003)</td>
<td>Before and after, no control</td>
<td>All patients admitted to five acute wards, 3 months before and after intervention</td>
<td>Signing in/out book; supportive breaking of bad news; multidisciplinary review after 2 absconds; identifying patients at high risk of absconding; targeted daily nursing time and facilitated social contact for high risk patients</td>
<td>Absconding rate reduced by 25% (p&lt;0.05 by chi square). Only 2 of the 5 wards showed a significant decrease.</td>
</tr>
<tr>
<td>Bowers et al. (2005)</td>
<td>Before and after, no control</td>
<td>Officially reported absconds for 15 wards, 3 months before and after intervention</td>
<td>Signing in/out book; supportive breaking of bad news; multidisciplinary review after 2 absconds; identifying patients at high risk of absconding; targeted daily nursing time for high risk patients. Included extensive training materials for staff.</td>
<td>Absconding rates reduced by 25.5% (p=0.05 by t-test). Eleven wards recorded a decrease (no statistical tests)</td>
</tr>
<tr>
<td>Cancro (1968)</td>
<td>Natural experiment, before and after, no control</td>
<td>All patients in one 100^200 bed US psychiatric hospital.</td>
<td>Before: closed hospital with elaborate and intensive searches for missing patients. After: open hospital (no further detail given)</td>
<td>Absconding rate (as % of admissions) increased from 20.4 to 28.4, i.e. by 39%</td>
</tr>
<tr>
<td>Gudeman et al. (1985)</td>
<td>Before and after, no control</td>
<td>All patients admitted to a 70-bed mental health centre attached to a teaching hospital over 38 months</td>
<td>Before: 2 standard wards to which patients were admitted, with a 25 bed day hospital programme. After: all patients admitted to day hospitals (100 places) with an Inn (if required) and an Intensive Care Unit</td>
<td>Numbers of absconds decreased by 54% (P&lt;0.001 by t-test)</td>
</tr>
<tr>
<td>LePage (1999)</td>
<td>Before and after, no control</td>
<td>Officially reported incidents for a 24 bed unit, 4 months before and after intervention</td>
<td>Token economy: tokens earned for engaging in therapeutic activities, groups, assessments and targeted behaviours. Tokens exchanged for privileges.</td>
<td>Absconding incidents reduced from 17 to 9, but did not achieve significance. Overall rate of untoward incidents reduced significantly.</td>
</tr>
<tr>
<td>Maratos and Kennedy (1974)</td>
<td>Crossover trial</td>
<td>Two acute admission wards over 22 weeks, crossover at end of week 9</td>
<td>Weekly hour-long community meetings</td>
<td>Number of absconds decreased by more than 50% under the experimental condition</td>
</tr>
<tr>
<td>Molnar et al. (1985)</td>
<td>Before and after, no control</td>
<td>All patients on one 80-bed psychiatric ward over 3 years</td>
<td>Doors unlocked except for temporary high-risk situations; new observation policy; new system for return or community referral of absconders.</td>
<td>Absconding rate reduced from 7% (rates had increased since doors unlocked) to 5.5% of all admissions (no statistical tests)</td>
</tr>
<tr>
<td>Richmond et al. (1991)</td>
<td>Before and after, controlled trial</td>
<td>All patients on three wards</td>
<td>After one month, one ward introduced the intervention with the other two serving as controls for 7 months. No information on how experimental ward chosen. Identification those at risk of absconding with hourly checks by nurses with written records. Use of a sign-out book for those with off-unit privileges. Increased patient involvement in treatment planning. Formal contracting over off-unit privileges. Early discharges with intensive follow up</td>
<td>50% reduction in absconding from the experimental ward (no statistical tests)</td>
</tr>
</tbody>
</table>
Two studies of the same absconding reduction programme for acute wards showed essentially the same result: a 25% reduction in rates of absconding (Bowers et al. 2005; Bowers et al. 2003a). The intervention involved increasing rule clarity through use of signing in and out book, identifying those at risk of absconding, targeted nursing time for high risk patients, careful breaking of bad news (e.g. refusal of leave), post-incident debriefing, multidisciplinary review after two absconds and facilitated social contact for those at high risk of absconding. Although suffering from the same design limitations as previous absconding intervention research, the consistent finding from these two studies (conducted independently) are at least indicative of a positive effect. Some caution is required, however, since changes in absconding rates were not uniform across wards, with some reporting no change or an increase in absconding. Wards which did show reductions had high rates of absconding at the start of the evaluation (Bowers et al. 2003), suggesting that this particular intervention might be best suited to wards with a particular absconding problem. Finally, one study described the introduction of a token economy to a psychiatric unit as a means of increasing patient compliance with behavioural plans and encouraging participation in groups and other activities (LePage, 1999). Four months after the introduction of the new system the number of absconding incidents had approximately halved, although the small numbers involved meant that this did not achieve statistical significance.

**Evidence for and against the working model**

Most of the research included in this review is descriptive in nature and concerned the characteristics of elopers and how these compared to other patients. There is relatively little evidence available which directly addresses nurses’ interactions with patients and so support for the working model is limited. Variations in absconding rates between wards suggests that the delivery of psychiatric care is an important factor, but the only available evidence points to consultant psychiatrists rather than nurses as having a significant influence (Bowers et al. 2000) and the reasons for this finding are unexplained. Another study also found a significant association between discharge type (AMA/AWOL vs regular) and the attending psychiatrist (Greenberg et al. 1994). The psychiatrist (one of three) with the highest rate of irregular discharge had strongest specialised background in treatment of addiction and a firmer policy refusing discharges.

The promising results from various anti-absconding interventions presents prima facie support for the working model in the sense that changes in ward structure and nursing practice would seem to reduce the incidence of absconding to some degree. However, the small number of studies makes it impossible to be certain about which aspects of the model are likely to exert greatest leverage on absconding rates. The intervention studies do indicate that relatively simple means of improving organisational support can reduce absconding. Thus Bowers et al.’s intervention package of reduced absconding rates by a quarter (2003, 2005). Importantly, the intervention appeared to work best in wards which are sufficiently well managed and organised to implement the intervention properly (e.g. stable staffing and good leadership) and where there is a willingness among staff to tackle absconding (perhaps at units with higher than average absconding rates). The intervention was
also successfully implemented as a self-training package (Bowers et al. 2005). Introduction of a checklist to standardise and record patient observations was a component of one ant-absconding programme (Richmond et al. 1991). Absconding at the unit had seemed to occur when patients exhibited non-verbal clues such as restlessness, irritability and refusal to take medicine. It was hoped that the new observation policy would that this would help prevent imminent absconding events, but also improvement in nurse-patient relationships and increase patient involvement in treatment planning. This approach is supported by a 50% reduction in absconding at the ward which adopted the checklist compared to a much smaller decline and an increase at the other two wards in the study (although the quality of the study is poor). A more wholesale change involved adopting a day centre system and reserving an inpatient intensive care unit for special needs, thereby discouraging institutional dependence (Gudeman et al. 1985). The authors argue that training for staff in the management of acute disruptive illness led to reduced absconding, but there was no direct evidence to support this. Interestingly, reductions in absconding were not reported at every ward subject to interventions (Bowers et al. 2005; Bowers et al. 2003a; Richmond et al. 1991). Thus, some did not show change in absconding and at others the level of absconding actually increased. This may reflect difficulties implementing the interventions, but perhaps also that effectiveness was limited to particular sub-groups patients (see below). Certainly, the characteristics of patients need to be controlled for when comparing the performance of individual wards.

There is some evidence from the reviewed literature that poor communication between nurses and patients is factor precipitating absconding. Reasons for absconding cited in several studies included patient anger towards staff, dissatisfaction with hospital rules and regulations and disagreements over treatment. For example, interviews with patients suggest that misunderstanding of discharge or leave rules and other miscommunication between staff and patients, particularly around shift changes, may have contributed to some absconding events (Kernodle 1966). This kind of finding suggests that organisational support and teamwork skill, particularly in terms of consistency and clarity in rules and regulations and in taking the time to explain to patients the reasons for treatment, may be potential means of reducing absconding. For example, wards which formally encourage communication between staff and through regular ward group meetings have been found to have the greatest impact on levels of absconding compared to other types of incident (Maratos and Kennedy 1974). Disagreements between nurses and consultants over risk assessment have been reported, together with confusion about roles and responsibilities regarding observation a possible factor for apparent failure of this procedure to prevent absconding (Clark et al. 1999). In contrast, improving definitions and making nurses accountable by requiring written records of observation may lead to a decline in absconding (Molnar et al. 1985; Richmond et al. 1991). Formalising treatment does not always lead to reduced absconding. A study of nursing care plans (NCP) found absconding behaviour occurred with similar frequency whether or not there was any record of risk assessment in NCP (Neilson et al. 1996). The NCPs were generally of poor quality, but did not improve absconding behaviour during admission.

The risk of absconding is greatest during the early period of an admission, so engaging with patients in order to reduce the evident stress and fear which often results after admission to a psychiatric hospital may go some way to minimising this
risk. This chimes with limited qualitative evidence that patients attach different meaning to absconding than staff (i.e. as a positive event; McIndoe 1986), emphasising that nurses need to assess patients' understanding of their treatments, listen to their concerns and provide more caring and warmer interactions. Absconding rates have been found to be higher when nurses’ concern for patients is weak and ward morale is low (Spiegel and Younger 1972). There is also a clear sense that patients get bored on the wards or that available activities are of little value to them. One conclusion from the literature may be that staff need specialist training in order to provide programmes for patients who function at different levels (Meehan et al. 1999).

Overall, there is far more evidence for the influence of patient than nursing factors on rates of absconding. Some patient variables have been found to have particular predictive utility. For example, one study reported that the AWOL and other discharges could be correctly classified between 62% and 71% on the basis of diagnosis and length of stay (Miller et al. 1983). A history of absconding has been found to be the factor most predictive of absconding incidents (Bowers et al. 2000; Brook et al. 1999). Fewer statistical associations are evident for clinical factors which might be indicative of problematic interactions with nurses, such as patients acting out although these were sometimes mentioned in descriptive accounts of reasons for absconding. One study found that medication refusal was predictive of absconding (Bowers et al. 2000). Alternatively, a forensic study provided little support for using sophisticated statistical models to predict absconding in a high-security population, arguing instead that comprehensive clinical assessments of individual patient profiles appear necessary in the case of identifying absconding risk (Moore and Hammond 2000).

Alcohol was often mentioned as a background factor. For example, patients often consume alcohol during their absence from hospital, although it is not clear if this in itself is a motivation for absconding. The role of alcohol is rarely examined explicitly, but one study identified it as a factor in 12% of absconding cases (Muller 1962) and statistical associations between absconding and a history of alcoholism (Morrow 1969; Raynes and Patch 1971) have also been reported. More general substance abuse was identified as a predictor of absconding by one study (Miller et al. 1983). The ‘absconding-misusers’ described by Bowers et al (2003) may reflect patients leaving the ward to access alcohol or drugs, or perhaps absconding may have prompted testing of patients. The role of substance use and related problems requires further research, in terms of a potential identifiable risk factor for absconding on admission, the influence of drink or drugs during official leave from hospital and later absconding incidents and how substance use may affect outcomes after a patient has absconded.

From the available literature, the most straight-forward method of reducing absconding is to increase hospital wide security (such as increasing the height of perimeter fences), lock ward doors and reduce access to potential exit points. Yet it is clear that such measures do not stop absconding altogether: even the most secure forensic hospitals reported a small proportion of patients managed to abscond. A crude comparison of locked and unlocked wards suggests that locking ward doors could reduce absconding rates by at least 50%. However, the evidence does not entirely support this simple assertion. Comparisons within hospitals of absconding
from locked and unlocked presents mixed results, and one study of a successful intervention found that door locking significantly declined during the intervention. Maintaining a high dependency unit for patients at risk of absconding or who have returned from absconding is one method of avoiding the need for a unit wide door locking policy (Meehan et al. 1999). Locking ward doors also needs to be balanced against the potential negative consequences for staff and patients (Van Der Merwe et al. 2009). Greater levels of self-harm have been associated with increased locking ward doors (Bowers et al. 2008), although the direction of effect could not be determined in this cross-sectional study.

**Points the model has missed**

Several studies indicate that staffing levels and turnover may be associated with absconding, and is identified as a factor by nurses themselves although few studies are able to provide any clear evidence of this. A study of irregular discharges (so AMA and AWOL) from a US hospital over 12 months found higher staffing levels at the ward with the lowest rate of irregular discharge, and lowest staffing at the ward with the highest absconding rate (Siegel et al. 1982). Similar results were found for staff experience.

This review also presents consistent evidence of patterns to the timing of absconding incidents. Absconding incidents may occur in clusters or vary by time of day, week or year. If there are identifiable periods of heightened risk of absconding then there may be relatively straight-forward measures to alleviate this which don not involve nursing interventions (e.g. locking ward doors during shift changes).

Domestic concerns figure highly among absconding patients as a reason for leaving the ward. It is perfectly understandable that these concerns would vex patients during their time away from home and it easy to see how patients might view absconding as a positive event. This view is unlikely to be shared by clinicians who have the safety of the patient uppermost in their minds. Staff fears of blame or punishment may influence practice as much as positive aspirations to improve experience of treatment for patients (Clark et al. 1999). Such discordance in perspectives suggests that elopement might represent an attempt on the part of the patient to communicate and change an unsatisfactory patient-staff relationship and as such represents a form of nonverbal communication (Cancro 1968).

**Discussion**

**Summary**

The methods employed to present rates of absconding varied and interpretation is hampered by lack of standardised measures. Patient based rates were more common that event based rates, but an average non-forensic 20 bed ward might expect to have 1.5 absconds per month. Rates based on admissions were highest in the UK and USA, but figures based on bed numbers provided much lower rates for the UK studies, suggesting that UK absconding rates are influenced by a higher turnover of patients. Repeat absconding rates were higher in the UK compared to other countries.
Studies of open wards reported higher rates of absconding and more repeated incidents than locked ward studies. Locking ward doors reduces the overall level of absconding but does not stop it altogether. From evidence available to this review open wards have over twice the rate of absconding than locked non-forensic wards. Interestingly, other forms of intervention can reduce absconding by up to a half. The standard of these intervention studies is generally poor, but indicate that alternatives to door locking might be as effective in reducing absconding.

Identifying patients at risk of absconding is difficult, although a history of absconding or expressing a desire to leave does seem to be a factor. Younger patients, a diagnosis of schizophrenia or PD and formal admissions are the most commonly reported features of absconders, although appear not to predict absconding in the few studies which have used multivariate techniques. Perceived treatment failure, boredom and domestic or relationship issues appear to be the main reasons why patients abscond. Thus, for example, patients’ home or friends and family are common destinations once outside the hospital. Consumption of alcohol is often reported. There is evidence of temporal patterns to absconding incidents, which tend to occur in the afternoon/evening, on weekends and in the warmer months of the year. Most absconding episodes are of short duration, typically a day or less, although a significant minority remain absent without leave for much longer periods. Absconding patients can be at risk of self-harm, suicide, physical health problems and offending. Criminal behaviour is usually minor. Although few forensic patients abscond, offending rates for these patients are higher. When patients return, changes to medication, reduced privileges and transfer to locked units may result. Nurses are fearful of blame for absconding incidents and regard staffing levels as an influence on absconding rates.

Lessons for future research
Only limited conclusions can be drawn from the literature included in this review. The majority of studies are descriptive in nature and very few use multivariate techniques to analyse which factors are most predictive of absconding. Of those that have used a more sophisticated analytical approach, relatively few predictive variables are identified. This may mean that it is in fact difficult to predict absconders with much accuracy, although some studies argue that this is not the case. Alternatively, the range of available measures is limited, with a bias towards background characteristics which are more easily recorded on official data systems and lacking in measures of symptomology and staff-patient interactions. The very clear reliance on officially recorded data and the potential limitations of this source of information are not adequately acknowledged. Rates of absconding are likely to be biased by under-reporting, with some hospitals actually defining a case as an absconder only when staff are sufficiently concerned. As well as under-counting the number of absconding incidents, this also risks misrepresenting the characteristics of absconders. In particular, there may be an over-inclusion of involuntary patients because they are most likely to be of concern to staff. Studies which defined an absconder as not returning by midnight or within 24 hours do not report the outcomes for patients who returned within these limits, so we do not know how these groups of patients compare in terms of outcome or characteristics. Are these patients equally at risk of harming themselves or others, offending and consuming alcohol or drugs? Allowing nurses simply waiting a while for a patient to return might be a sensible approach, but for
These types of questions are important if the kinds of interventions to reduce absconding described above are to be fine tuned or better targeted. The lack of variety of definitions for absconding among the studies makes comparisons between them much more difficult.

More intervention studies are needed. In the ten years since the previous review (Bowers et al. 1998) only three further anti-absconding intervention studies were identified in the literature. Quite a lot is known about the characteristics of absconders and circumstances of patients leaving hospital, but reliable methods of reducing absconding beyond locking ward doors are still required. The research at least show that such interventions are possible to implement, although there does seem to be a question as to whether they are able to impact on more difficult or persistent absconders. There is also a need to improve the standard of interventions studies. The research designs for the intervention studies were weak. There were no randomised trials. Most studies used a before and after design with no control. Positive results were not always demonstrated with statistical tests, and did not take account of other factors (e.g. patient characteristics).

It is clear that a small minority of patients are responsible for multiple episodes of absconding. Although there is more data on repeated incidents of absconding than we have found in other reviews of conflict and containment, there is still insufficient data and where it is available it is often inadequately analysed. The available literature provides information about the relative numbers of repeaters and how they contribute to the overall level of absconding, but we have very little idea of how patients who repeatedly abscond differ from single absconders and non-absconding patients. This is should be a priority for future research because previous absconding is identified by several studies as a risk factor.

There is a case for studies from forensic settings to be considered separately from the rest of the absconding literature. Rates of absconding are considerably lower than for other types of psychiatric hospital (unsurprising given the higher level of security). The profile of absconding patients is different, with a significant proportion having a history of violent offending. When patients do abscond they are more likely to do so in groups and to commit offences. These studies skew the literature towards primary concerns of security, whereas the bulk of non-forensic studies reveal that the motivations and outcomes of absconding patients are on the whole mundane.

Overall, the literature has not advanced substantially since the Bowers et al. (1998) review. The major contribution to the literature comes from the same research group who have demonstrated the feasibility of implementing ant-absconding measures which can be successfully used as an alternative to locking ward doors. They have also shed more light on patients’ reasons for absconding and the potential consequences of the decision to leave the ward. Several issues have been identified in the discussion above which need to be addressed by further research. Importantly, greater rigour in the standard of design and analysis in future studies is required.
Reference List


