A decorative vertical bar on the left side of the slide, featuring a gradient from light to dark red. Several solid red circles of varying sizes are arranged vertically along this bar, with the largest circle at the top and smaller ones below it.

# **FIRE SETTING IN PATIENTS WITH LEARNING DISABILITY: ASSESSMENT AND TREATMENT**

**Dr Phil Temple**

# AIMS

- Discuss assessment of fire setting in patients with ID, with specific reference to available measures.
- Review gender considerations.
- Discuss risks related to future recidivism.
- Note key factors in clinical interview.
- Explore treatment of fire setters with ID.



# FIRE SETTING ASSESSMENTS

- A number of specific fire setting assessments exist.
- Some of the measures are designed to guide and support functional analysis and clinical interview.
- These assessments are suited to serve as the basis for clinical assessments of fire setters with ID.
- Further measures aim to capture constructs specific to fire setting and are regularly used in research evaluating the outcomes of fire setting treatment programmes.



# FIRE INTEREST RATING SCALE (FIRS)

- Examines self-reported affect when imaging fire-related situations on a Likert scale from (1) most upsetting or absolutely horrible to (7) very exciting.
- Higher scores indicate increased levels of fire interest.
- Developed specifically for people with ID.
- Regularly used in clinical practice
- Limited psychometric examination.
- Incorporated into a factor analysis by O Ciardha et al – recommended combining these scales using a scoring template that will generate an overall combined score of five core fire setting factors



# FIRE ATTITUDE SCALE (FAS)

- Self-reported scale examining fire-supportive attitudes (e.g. “if you’ve got problems, a small fire can help you sort them out”) rated on a 5 point scale (1 = strongly disagree)
- Regularly used in clinical practice
- Limited psychometric examination.
- Acceptable internal consistency
- Incorporated into factor analysis by O Ciardha et al – as with FIRS



# PATHOLOGICAL FIRE SETTERS INTERVIEW (PFSI)

- Structured interview which is supplemented with: (i) demographics, personal, family, and past history of offending, (ii) personal circumstance conditions, (iii) situational setting conditions, (iv) antecedents to fire setting, (v) motives for fire settings, (vi) consequences (thoughts, feelings, and actual fire setting) information from patient records, staff observations, and patient/informant completed clinical assessments, which contribute to a formulation of risk, need, and intervention plans.
- Developed specifically for people with ID.
- Psychometric properties have yet to be evaluated.



# NORTHGATE FIRESETTER RISK ASSESSMENT (NFRA)

- Captures information on risk factors for fire setting.
- The items include five historical items (e.g. previous history of fire setting), which can guide formulation
- And six clinical items (e.g. stress, depression, anger) which can monitor fluctuation of risk through treatment
- Designed for and with adults with ID.
- The NFRA has not been subjected to rigorous evaluation for reliability and validity.



# IDENTIFICATION WITH FIRE QUESTIONNAIRE (IFQ)

- A self-report measure of identification and affinity with fire (e.g. “fire is almost part of my personality”) rated on a 5-point scale (1 = strongly disagree)
- Regularly used in clinical practice.
- Acceptable internal consistency reported.
- Incorporated into a factor analysis by O Ciardha et al...



# FIRE PROCLIVITY SCALE (FPS)

- Provides an indication of an individual's propensity to engage in fire setting.
- Participants read six hypothetical vignettes describing fire setting situations of varying degrees of severity, are asked to imagine themselves as the protagonist, and then requested to respond to four questions using a 5-point Likert scale assessing: (i) fascination with the fire described, (ii) behavioural propensity to act similarly, (iii) general arousal to the fire described, (iv) general antisocialism.
- No reports of clinical use with ID population.
- Respondents with ID are likely to have difficulties with the vignettes.
- Subscales and overall total score reported to have acceptable to good internal consistency.



# THE FIRE SETTING SCALE (FSS)

- 20 item scale measuring antisocial behaviour (e.g. “I am a rule breaker”) and Fire Interest (e.g. “I get excited thinking about fire”).
- Items rated using a 7-point Likert scale (1 = not at all like me)
- No reports of use with ID population.
- People with ID may struggle with the number of Likert scale response options.
- Studies have reported internal consistency ranging from acceptable to excellent.



# ST ANDREW'S FIRE AND ARSON RISK INSTRUMENT (SAFARI)

- Semi-structured interview developed for use with forensic psychiatric settings, examining:
  - antecedents, behaviour, and consequences associated with fire setting; reading to change; fire setting self-efficacy; the future probability of fire setting; barriers to change; and understanding of fire setting behaviours.
- No reports of clinical use with ID population.
- Psychometric evaluation carried out on 15 female fire setters detained in mental health service, which reported good interrater reliability, internal consistency, and convergent validity with a risk management tool.



# THE TRANNAH FIRESETTING INVENTORY (TFI)

- Developed for young people with ID (no definition of “young” provided).
- Gathers information from reports/records, from informants and the respondent, to establish the history of fire setting.
- Completes a functional analysis of their fire setting behaviour.
- Examines fire knowledge and fire-safety skills
- Explores fire interest.
- Assesses the risk of future fires.
- Evaluates treatment needs.
  
- Developed specifically for people with ID.
  
- Psychometric properties yet to be evaluated.



# FIRE SETTING ASSESSMENTS - LIMITATIONS

- Minimal research has examined the validity, reliability and psychometric properties of the available measures.
- Development of FIRS and FAS predated recent progression in the theoretical literature (e.g. do not capture all the relevant information relevant to fire-setting, such as how fire might be soothing etc).
- Only some of the tools designed for an ID population.
- Many of the core deficits associated with ID can challenge reliable and valid self-reporting; while linguistic content can present cognitive demands.
- Some people with LD have difficulties with receptive language, limitations in understanding, cognitive processing and expression.
- Difficulties also arise when using subjective or abstract concepts; and negative or passive phrases.
- Short-term memory difficulties may prevent the person from holding questions in mind while they consider a response.
- Various biases are common among people with ID: acquiescence, recent bias, nay-saying, and suggestibility.



# ASSESSING FIRE SETTING AMONGST PEOPLE WITH ID

- Fire setters with ID have a distinctive set of needs that will require specialist treatment responses. For example:
- Their understanding of the extent and severity of the consequences of their actions may be limited.
- Moral reasoning delays may impact the extent to which they consider the needs of others.
- Comprehension of the circumstances and ability to identify and moderate emotional impulses might be impaired.



# ASSESSING FIRE SETTING AMONGST PEOPLE WITH ID

- Tranah and Nicholas recommend considering:
  - The person's level of ID
  - Whether there are any associations between ID and fire setting
  - Any previous fire setting
  - Current fire setting risk
  - The purpose of fire setting
  - Treatment needs



# ASSESSING FIRE SETTING AMONGST PEOPLE WITH ID

- Assessing function is essential, as it can highlight treatment needs and inform the management approach.
- However, this can be challenge (even impossible), such as the 'arson without motive' described by Barnett and Spitzer (1994).
- A study focused on arson perpetrators without ID reported that motivation could not be established in 40% of cases.
- This may be even higher in a population of individuals with LD, given difficulties with communication and emotional introspection.
- Murphy and Clare (1996) though found that most individuals were able to identify emotional states present at the time they started the fire.



# ASSESSING FIRE SETTING AMONGST PEOPLE WITH ID

- Important also to consider fire fascination and fire play.
- Fire fascination is a normal phenomenon between age 3-5; with the majority of children learning the rules of fire safety and prevention by age 10. (Tranah and Nicholas 2013).
- Whether the pathway for fire fascination and fire play is the same for a population with ID is less clear.
- It is likely that learning the dangers of fire is delayed in LD population.
- Need to consider whether what is being assessed is true fire setting or more attributable to fire play.



# ASSESSING FIRE SETTING AMONGST PEOPLE WITH ID

- Jackson et al (1987) proposed a model of functional analysis for the conceptual basis of fire-setting assessment that is widely endorsed.
- The model promotes the development of a hypothetical working model, to include:
  - Information on the situations in which fire-setting occurs
  - Which responses (emotional, physiological, cognitive, overt) behaviour occurs
  - The consequences of fire-setting that might reinforce future fire-setting.



# ASSESSING FIRE SETTING AMONGST PEOPLE WITH ID

- **Rose et al (2016)** found that first fires often occurred in childhood, often in response to some form of abuse.
- Reasons for future fires varied, but themes included: escaping distress, to enable positive emotional experiences (inc. a feeling of control), and as a means of communication with services.
- **Devapriam et al (2007)** reviewed 15 patients with ID who has committed arson – finding that revenge was the underlying motivation in 9, followed by suggestability (3), pyromani (2) and other mental illness (1).
- Of these patients, 11 were living in the community at the time of their offence.
- **Puri et al (1995)** reviewed 36 patients – finding that revenge was the underlying reason in only 2, with psychosis (10), psychoactive substance use (6), pleasure from fires (6), depression (5) and burglary (4) all more commonly cited reasons.



# GENDER CONSIDERATIONS

- Female fire-setters are an under-researched population, with less known about their specific characteristics and treatment needs.
- While literature is scarce, a number of gender differences have been highlighted.
- Women are more likely:
  - to set fires as a 'cry for help'
  - to report fire setting in the context of distressing life experiences
  - to commit offences in or close to their place of residence
  - to be older in age
  - to have psychiatric co-morbidity
  - to have history of sexual abuse
- Earlier studies reported common motivators to be: revenge, attention seeking, conflict with authority and self-harm.
- Stewart (1993) found that approximately one-third had multiple motives and that for 20% fire-setting was instrumental.
- Self-immolation as a subtype appears more prevalent in females.

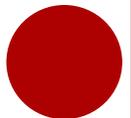
# FUTURE RECIDIVISM RISK

- Assessing this is challenging.
- Conviction rates have a low base rate – only 9% arson fires result in the suspect being charged or cautioned.
- Much of the research is carried out on child and adolescent populations.



# FUTURE RECIDIVISM RISK

- Sakheim et al (1991) highlighted a number of psychological characteristics consistently highlighted in those more seriously at risk, including:
  - Intense feelings of anger and resentment at maternal neglect, rejection, deprivation or abandonment
  - Feelings of impotent rage at insults or humiliation, resulting in a narcissistic injury and aggressive retaliatory wishes
  - Excitement, pleasure or sexual arousal stimulated by lighting or watching fires
  - Fire preoccupation as revealed on projective tests
  - Poor judgement in social situations
  - Weak social anticipation, poor planning and competence
  - Impulsivity and poor self-control
  - A tendency to experience little guilt or remorse about previous fire-setting
  - Cruelty to children or animals
  - Psychiatric diagnosis of aggressive conduct disorder



# FUTURE RECIDIVISM RISK

- Kennedy et al (2006) reported that previous involvement in fire-setting behaviour was the single best predictor of recidivistic fire-setting.
- Recidivists had greater levels of interest in fire and fire-related activities, displayed more covert antisocial behaviours, were more likely to be male and older.
- Also reported poorer social skills and higher levels of family dysfunction.



# FUTURE RECIDIVISM RISK

- In terms of historical factors, those more strongly associated with perceived dangerousness are setting fire to an occupied building and an apparent intention to endanger life.
- Dickens et al (2009) examined characteristics of those who were one-time only fire setters as opposed to multiple fire setters and analysed those who set more serious fires (in terms of impact).
- Reported that repeated arsonists were younger, single and more likely to have experienced childhood disturbance.
- Personality disorder and previous time in prison also associated.
- Recidivism was not associated with the setting of serious fires.
- Very few variables were able to predict whether subjects had set a serious fire – although intentional behaviours such as multiple-point fire setting and the use of fuel/accelerants appear to indicate highly dangerous fire setting behaviour.



# CLINICAL INTERVIEW

## ○ Areas of focus:

- Risk factors (both pertaining to index/most recent fire-setting event and recidivism)
- Motivation for fire setting
- Psychiatry co-morbidity
- Substance misuse
- Personality features
- Measured IQ and adaptive functioning
- Treatability, including willingness to engage



# CLINICAL INTERVIEW

- Be aware of suggestibility (note tools to assess this)
- Collateral history invaluable.
- Ensure a thorough history of previous offending behaviours.
- Bear in mind other risks, e.g. suicidality.
- Consider diagnostic overshadowing, e.g. signs of mental illness attributed to ID.
- Establish treatability, bearing in mind factors associated with recidivism.



# TREATING FIRE SETTERS WITH ID

- Fire setters share many of the characteristics of those who commit other types of crime; as such their treatment needs may align with those of other offender groups.
- The 10-point treatment plan is relevant:
  - (1) a multi-axial diagnostic assessment
  - (2) a collaboratively developed psychological formulation
  - (3) risk assessments and management plans
  - (4) a behaviour support plan
  - (5) pharmacotherapy
  - (6) individual and group psychotherapy, guided by the psychological formulation
  - (7) offence-specific therapies
  - (8) education, skills acquisition and occupational / vocational rehabilitation
  - (9) community participation through a system of graded leave periods
  - (10) preparation for transition



# TREATING FIRE SETTERS WITH ID

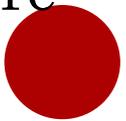
- A number of offence-specific treatments for fire-setting behaviour in ID exists.
  - Clare et al (1992) described the application of a cognitive behavioural model with a 23 year old man with IDD.
  - The initial assessment found that the participant set fires to reduce negative emotions and gain attention.
  - His treatment plan incorporated assertiveness, social skills, coping strategies, graded exposure and relaxation techniques.
  - Covert sensitisation was implemented, where imagined fire setting activities became associated with punishment and seclusion.
  - After 30 month follow-up, no further fire setting offences were reported.
- 

# TREATING FIRE SETTERS WITH ID

- Taylor and colleagues developed the Northgate treatment programme.
- The treatment is a 40-session group-based intervention which targets criminogenic factors associated with fire setting – e.g. fire interests and attitudes toward fire/firesetting.
- Utilising the cognitive behavioural framework, each participants offence cycle is analysed in turn, with regard to: (i) antecedent factors and triggers, (ii) the cognitions, emotions and behaviour experienced at the time fires were started, (iii) the positive and negative consequences of fire setting behaviour.
- Participants also received education concerning the dangers and costs of setting fires.
- The group focuses on skill development, in order to enhance future coping with emotional and interpersonal problems, and personalised relapse prevention plans are integral to the treatment.



# TREATING FIRE SETTERS WITH ID

- The first cohort – 14 inpatients with IDD and arson convictions detained in LSU – were assessed pre- and post-treatment on a range of measures and followed up for a period of two years.
  - Participants displayed significant improvements, with reduced fire interest and anger, as well as improved self-esteem.
  - Taylor et al (2006) subsequently described the outcomes of a group psychological interventions, using case series methodology, for six female fire setters with mild and borderline IDD.
  - Participants indicated improved attitudes toward fire, with no offending behaviour reported at follow up (though there was some group variability in treatment response).
- 

# TREATING FIRE SETTERS WITH ID

- Taylor et al (2014) reported on a follow up of 24 fire setters (16 men, 8 women) with ID who had completed treatment.
- The follow up period ranged from 4 to 13 years.
- 17 participants were living in the community, 4 remained in hospital, 2 were deceased.
- At follow-up, there had been no further arrests or convictions for arson in this cohort.
- File data available showed that prior to treatment that sub-group had been responsible for 425 fires.
- This suggests that the intervention is associated with significant harm reduction.
- The authors concluded that the results suggest female fire setters with ID can successfully engage with and benefit from the therapeutic approach described; and that these gains appear to be reflected in an absence of fire-setting in the short to medium term.

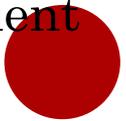


# TREATING FIRE SETTERS WITH ID

- These studies (except the latter) were subject of a systematic review (Curtis et al 2012).
- Noted that whilst all studies demonstrated reduced fire setting following programme completion, their research designs were far from robust.
- Thus they concluded that there is a lack of truly evidence based IDD-specific treatment programmes, though the option of adapting programmes used in the non-IDD population (such as fire safety education and CBT based approaches) merited further exploration.



# TREATING FIRE SETTERS WITH ID

- The literature thus far suggests a number of factors which should be taken into account.
  - First, the need for therapies to have their foundation in comprehensive functional analysis.
  - Second, the need for treatment to address a broad range of psychological difficulties, and to be delivered by experienced clinicians.
  - A number of factors can preclude meaningful engagement (in both individual and group-based interventions) and thus treatment response.
    - Reading and other receptive communication deficits should be considered.
    - The population can find generalising learning acquired in one setting to another challenging.
    - As such 'one-off' educational interventions likely to be insufficient and a combined approach involving education and CBT is recommended.
- 

# TREATING FIRE SETTERS WITH ID

- Finally, despite long-term nature of deficits in ID, there has been little discussion in literature of the importance of long-term support and supervision in the community (Chaplin and Henry 2016).
- The authors noted that these issues often necessitate lifelong involvement from multiple agencies, in order to carry out supervision, as well as to support transition back into the community after prolonged durations.



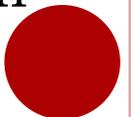
# CONCLUSIONS

- Fire-setting behaviours in individuals with ID present numerous challenges for assessment and management by healthcare professionals.
- Establishing the need for fire-setting behaviour is less straightforward amongst this population, as behaviours may not have come to the attention of authorities.
- A thorough review of file information and detailed clinical interview required.
- The clinician should consider the use of specific psychometric measures to further assess factors that influence or maintain fire-setting.
- Attention should be paid to the accessibility of these measures and whether they are validated for people with IDD (but should not preclude assessment)



# CONCLUSIONS

- A number of treatments have been described that target fire-setting behaviour and aim to reduce the risk of future offending.
- Many are grounded in psychological theory and have demonstrated positive results in a variety of clinical settings, although methodological difficulties are evident.
- None-the-less, the interventions share components which seem to contribute to efficacy.
- Treatments should be grounded in thorough functional analysis.
- Treatment should be carried out over a period of time – giving the opportunity for participants to practice and apply their learning.
- Treatment should take into account the factors which can affect accessibility for people with ID.



# SUMMARY

- Discussed assessment of fire setting in patients with ID, with specific reference to available measures.
- Reviewed gender considerations.
- Discussed risks related to future recidivism.
- Noted key factors in clinical interview.
- Explored treatment of fire setters with ID.



# QUESTIONS AND DISCUSSION

