

**PURE VERSION: Campbell, M. & McCue, M. (2012) Assessment of Interpersonal Risk (Air) In Adults with Learning Disabilities And Challenging Behaviour – Piloting A New Risk Assessment Tool. British Journal of Learning Disabilities. Published online 2012.**

### **Accessible summary**

A new risk assessment tool, called the *Assessment of Interpersonal Risk (AIR)*, has been developed. This is to measure the risks between adults with learning disabilities who have challenging behaviour and mental health problems. The tool is used to record five different types of risk. It was used for a period of six months in a NHS assessment and treatment unit, to see how well it worked. Incidents of challenging behaviour for five people were recorded over this time.

The Assessment of Interpersonal Risk was combined with the risk assessment tools already being used in the assessment and treatment unit.

Results showed that the AIR tool may be a useful addition to:

- effectively managing risk
- informing assessments, especially when people are moving from in-patient services
- support professional judgement to make defensible decisions about risk

### **Abstract**

A new risk assessment tool, *Assessment of Interpersonal Risk (AIR)* was piloted and evaluated to measure risks factors and compatibility between individuals living in an assessment and treatment unit in one NHS area. The adults with learning disabilities in this unit had severe and enduring mental health problems and/or behaviour that is severely challenging.

The aims of this small scale research project were to estimate the reciprocal risk to and from each individual across five main risk domains and to enhance professional judgement to make defensible decisions about interpersonal risk.

Data was recorded on incidents involving five individuals over a period of six months. Individual Rating Profiles were incorporated in existing Individual Risk Management Plans, together with Interpersonal Profiles, recording risk evaluations between named individuals across the five risk domains.

Results showed that the AIR tool may be a useful addition to existing effective risk management, to inform assessments and future discharge planning.

## Introduction

A new risk assessment tool, the Assessment of Interpersonal Risk (AIR) profile, attempts to identify and measure a number of risk factors between two individuals, by estimating the perceived reciprocal risk to and from each individual across five main risk domains. This was a pilot study to evaluate the tool. The research was a joint project between NHS Fife and the University of St Andrews and was funded as a Knowledge Transfer Partnership by the Technology Strategy Board.

Risk assessment in the context of adults with learning disabilities has been defined as, “*both the ascertainment of the presence of a hazardous behaviour in the past or present, and also the likelihood of the occurrence of such a behaviour*”. Similarly, risk management is the development of strategies to prevent or minimise the impact of events in the least restrictive manner (Johnston, 2002).

For adults with learning disabilities who also have challenging behaviours the assessment risk process needs a particular, individual focus, as individual risk factors including communication difficulties or a history of abuse are far more prevalent (RCP/BPS/ RCSLT, 2007).

### *Risk assessment tools in context*

Much of the research done over the past twenty years has focused on offenders with learning disabilities and the resultant evidence base for clinical practice with people with challenging behaviour is still relatively small (Johnston, 2002; Clare & Murphy, 1998).

The available models of risk assessment have largely been adapted for use with people with learning disabilities (Tindall, 1997; Johnston, 2002) and for people with mental illness, and offenders with learning disabilities (McIvor & Kemshall, 2002). Learning disability services are using risk assessment tools developed for a “non-learning disability population” or have adapted these tools using broad principles of risk assessment (Turner, 2000; Taylor & Halstead, 2001). For example, clinicians have used tools first validated in general and in forensic psychiatry to assess and manage risk in people with learning disabilities (Halstead 1997; O'Rourke & Hammond, 2000).

The adaptation and use of these tools however, is largely a matter of expediency rather than one based on evidence:

*“There is no research evidence to support the assumption that current forensic assessment tools are valid or indeed invalid in the population with intellectual disabilities.” (Johnston, 2002)*

There is also variation in how tools are selected for use. Risk assessment tools are more likely to be used by social work staff if they are easy to use and can be administered and scored simply, whilst psychologists are more likely to use tools that have been fully validated (McIvor & Kemshall, 2002). There is a question over whether it is feasible or desirable to use a common approach to risk assessment across different disciplinary groups, but greater consistency is considered important (McIvor & Kemshall, 2002).

Until fairly recently, clinical rather than actuarial methods of risk assessment have predominated in learning disability services, largely because of the lack of actuarial data for this population (Johnston, 2002). This is slowly changing. One of the most commonly used tools in learning disability services currently is the HCR-20 (RCN, 2010; Douglas, Guy & Weir, 2006; Scottish Executive 2000; Gray et al, 2007) which has been described as a “*hybrid interactive framework*”. This covers the Historic, Clinical and Risk factors, using twenty fields to combine static and dynamic variables. The instrument has shown good convergent and concurrent validity when tested in mental health and high-security forensic settings (Claix & Pham, 2004; Warren et al, 2005). The HCR- 20 has been shown to have value in predicting risk for future violent incidents when tested in a UK population of offenders with learning disabilities (Lindsay et al. 2008).

The Emotional Problem Scale (EPS) (Prout & Strohmer, 1991) is a risk assessment tool specifically developed for adults with mild learning disabilities (Lindsay et al, 2008). It shows good reliability and validity and has been used to evaluate the severity of symptoms and for predicting future likelihood of challenging and violent behaviour when used with offenders with learning disabilities in the UK (Lindsay et al, 2008). Another risk assessment instrument, The Violence Risk Appraisal Guide (VRAG) (Quinsey, Harris, Rice & Cromier, 1998) has also shows significant predictive validity in relation to violent incidents.

In practice, all of these risk assessment tools are used predominantly in services for serious offenders, with and without learning disabilities in secure or semi-secure settings. It is much more common in “mainstream” learning disability services for the service to have developed their own form of risk assessment, based on some commonly agree risk domains, combined with clinical judgements. The risk assessment instruments may be included in an agreed behavioural assessment and intervention plan. More comprehensive risk management

practices are more common in acute or emergency settings, such as assessment and treatment units, or specialist services, where the risk of violence is higher.

These locally developed risk assessment tools have poor or unknown validity for predicting future incidence, frequency and intensity of challenging behaviours and other violent or disruptive incidents (Lindsay & Beail, 2004). There is also a problem of transferability – whilst one service might rate most of its clients as high risk, another service, using their own locally developed risk assessment system may rate the same clients as moderate or low risk (Lindsay & Beail, 2004). “*Even within agencies or professional groups different methods of risk assessment were evident*” (McIver & Kemshall, 2002).

The risks posed *by* and *to* individuals with learning disabilities and challenging behaviour differ from those of non-disabled adults in several ways, which has implications for subsequent management and treatment. For example, clinical and service guidelines for supporting people with challenging behaviour (RCP/BPS/ RCSLT, 2007) highlight the fact that this population are at higher risk “*of receiving abusive or restrictive practices*”. Similarly, people with challenging behaviour and risk has become almost synonymous and services have become structured around a hierarchy of risk management or risk containment (RCP/BPS/ RCSLT, 2007).

Another difference is the length of time spent “in services” and how this can impact on the quality of services experienced. Adults with acute mental health problems, for example, are more likely to be residents of managed care services for a fixed period. In contrast, adults with challenging behaviour will spend indeterminate periods in care and treatment services, where the challenging behaviour may be managed, rather than treated and the environment and staff practices can degenerate over time because of the wide variety of challenging behaviour (Campbell, 2010; RCP/BPS/ RCSLT, 2007)

There are recognised difficulties of risk assessing and managing adults with challenging behaviours and specialist expertise is needed (Leonard, Shanahan & Hillery, 2005). The presence of learning disability itself poses particular risks for and by individuals, leading to acts of “*omission and commission as a consequence of skill deficit*” (Edgerton, 1992).

#### *Rationale for developing the Assessment of Interpersonal Risk (AIR)*

It has long been recognised that direct care staff, rather than psychologists, psychiatrists or other specialised professionals have the greatest potential as “*agents for change*” in relation to people with learning disabilities who have challenging behaviour (Ayllon and Wright 1972).

What is less recognised perhaps is that other service users with challenging behaviour are often the main “agents for challenging behaviour” in congregate settings, such as assessment and treatment units. The antecedents for one person’s challenging behaviour is often the behaviour, challenging or otherwise, of another service user, and the probability of this increases proportionally with the number of people living in the same setting.

The AIR has been developed using evidence-based practice, on the premise that the main focus of risk assessment should be governed by the impact of that person’s behaviour on the individual and those around them, including risk of loss of participation in therapeutic activities (RCP/BPS/ RCSLT, 2007). The aim of developing AIR was to complement existing, in-house risk management for service users and staff.

Between 1996-2007 the accelerated long-stay Learning Disability Hospital closure programme in Scotland (Scottish Government 2004) and in the rest of the UK (Dept. of Health, 2001; Healthcare Commission, 2007) resulted in the movement of people with learning disabilities both within and out-with these Hospitals. Resident movement from hospital was to either community based housing models or to community based In-patient services. The legacy and impact of this residential service re-provision was that individuals experienced changes in those they lived with, and those who supported them. This process took place against the back-drop of associated changes in environmental, procedural and interpersonal risk. It was in recognition of this and the need for more defensible risk assessment and management that the Assessment of Interpersonal Risk tool was developed.

None of the existing risk assessment tools is specifically designed to measure risks factors *between* such individuals living in the same service setting. The AIR has been developed for multidisciplinary use in in-patient and community settings. This was an attempt to introduce a tool that increased staff awareness of the dynamic and changing nature of risk management, rather than focussing purely on risk elimination, which can be used, sometimes inappropriately, to stop people with learning disabilities from participating in activities (Johnston, 2002; RCN, 2010). Most risk policies emphasize hazard assessment, and health and safety issues (Alaszewski & Alaszewski, 2002).

The AIR risk assessment was designed to add to and support, not supplant, existing risk assessment processes in the service in which it was piloted. The AIR is a diagnostic assessment to identify the interpersonal risk factors in the environment that can be reduced and the best ways to carry out intervention activities with this in mind, as part of a wider risk management strategy. There was a range of existing, evidence-based risk management strategies in use to avoid or minimise risk. These included de-escalation procedures,

observation policy, relaxation prompting, anxiety management and supported behavioural self-management procedures. The monitoring of such strategies is carried out locally and nationally. The Significant Risk Advisory Group (SRAG) is a multi-agency, interdisciplinary group that reviews clinical treatment and risk management of individuals in the Assessment and Treatment unit. The SRAG existed in this NHS authority before Multi-Agency Public Protection Arrangements (MAPPA) were adopted nationally. The SRAG continues with its original remit, but now works in conjunction with MAPPA and all cases go through the MAPPA process.

## Method

### *Participants*

The adults in this NHS assessment and treatment unit are described as having learning disabilities with severe and enduring mental health problems and/or behaviour that is severely challenging. The unit provides a specialist and highly structured service.

This newly built NHS unit, opened in May 2010, has capacity for 13 adults. The majority of service users in this setting had been referred by joint (Social Work/NHS) Learning Disability Community Teams or by psychiatrists within the NHS area. A small number were referred and paid for by other NHS authorities.

Five of the residents were selected by staff for involvement in the piloting of the AIR. These individuals previously lived in an NHS ward in a large learning disability hospital, which was closing. The criteria for selecting these particular residents was:

- long term residents in NHS care (average of 11 years)
- relocated to Assessment and Treatment Unit at the same time
- longer term plans to relocate each of these individuals to community based settings, living with other residents
- a gender mix

The participants were 3 women and 2 men, age range 34-68.

### *Instrument*

The Assessment of Interpersonal Risk has five domains, defined as follows:

- Aggression / Physical Harm (*at risk from assaultive behaviour, use of weapons, or the behaviour of other individual, stimulates self-harm*)

- Behaviour /Damage to Property (*at risk from destructive behaviour, damage to furnishings, wilful damage to property (e.g. fire setting behaviour).*)
- Intimidation / Emotional (*at risk of withdrawal, social isolation, becomes less talkative/interactive, appears intimidated and uncomfortable in the other individual's presence and/or may be verbally abused by the other individual*)
- Sexual (*may be sexually exploited by the other individual, with or without consent*)
- Developmental (*where the presence of, or relationship with the other individual may interfere with or compromise therapeutic activity, intervention, person-centred plans or service function*).

Risk ratings for each of these domains are calculated by plotting “impact” against “probability” on a matrix. Impact descriptors rate 1 to 5, with 1 being “no injury likely to either person/no serious negative outcomes for either” and 5 being “death by homicide/suicide”. Probability descriptors are on a four point rating with 1 being “Unlikely to happen” and 4 being “Appears certain to happen”. When plotted together, risk ratings range from “Very low” to “Very high” risk (See illustrative purposes, see Figure 1 showing three of the five domains as they appear on the form).

Interpersonal ratings are calculated between individuals A & B, A & C, A & D etc. using each of the five domains of the AIR tool. This provides an assessment of risk between individuals, and a baseline measurement for comparison with future ratings.

The tool is intended to be context specific in terms of personal and environmental conditions, in that, each completion of the assessment recognises circumstances in attempting to estimate overall risk levels. This means that the assessment must be updated when there is any significant change in conditions.

Figure 1: Sample of Assessment of Risk, Main Profile.

INSERT FIGURE 1 HERE

#### *Procedure*

The piloting and evaluation of the AIR tool was sequenced as follows:

1. “Dual” risk assessment profiles were completed to measure anticipated interpersonal risk. This allowed reciprocal risk to be determined using a single profile document which considers the risk from individual 'A' to individual 'B' and then from individual 'B' to individual 'A' across the five risk domains. For five individuals, this represents a total of 100 risk ratings (Individual 'A' rated against individuals 'B', 'C', 'D' and 'E' for each of the five domains, then individual 'B' rated against 'C', 'D' and 'E' for the each of the five domains, etc.). The profiles were completed in one day in the assessment

and treatment unit, with the 'named' registered nurses for the five individuals being given the time to complete the assessments under guidance, and with the input of the appropriate care assistants for each of the residents taking part in the pilot. Following completion of the risk assessment profiles, face validity of risk ratings was checked with the service manager, the named registered nurse and other staff for each individual.

2. Two months later the research staff reviewed the risk management profiles to ensure that these included details of the risk management strategies being employed to minimise or obviate risks quantified through the assessment tool. Any additional risk management measures included in these profiles were intended to complement and not replace other risk management plans currently in place within the service.
3. After four months an incident review was carried out. This looked at recorded incidents in each of the five domains: aggression, physical harm, damage to property, intimidation, sexual abuse, and developmental. Following analysis of recorded incidents, risk ratings for each of the five individuals were reviewed and amended as appropriate.
4. The lack of recorded incidents relating to the 'Developmental' risk domain of the A.I.R. assessment indicated that existing incident recording systems were insufficiently sensitive to developmental risk situations, and a specific method of recording developmental risk related incidents was devised, accompanied by guidelines and introduced to the service for the five individuals six months after the beginning of the project.
5. A further incident review and subsequent analysis took place one month later, and a closing risk rating review took place at the end of the project, after nine months.
6. A.I.R. evaluation questionnaires were completed by care staff involved in the pilot.

## **Results**

- Completion of all 100 risk domains returned 8 ratings of 'High' risk, 18 ratings of 'Medium' risk and 74 ratings of either 'Low' or 'Very low' risk. The majority of high and



medium ratings were recorded on the 'Intimidation /Emotional Harm' domain of the risk profiles.

- First incident review (24<sup>th</sup> June - 26<sup>th</sup> October 2010) revealed a total of 26 recorded incidents, 25 of which related to verbal disagreements between two of the five individuals taking part in the pilot. The other incident was an allegation of physical aggression by one resident against another.
- Review of risk ratings in light of recorded incidents resulted in the following changes to risk ratings.

Of the previous 8 'High' risk ratings;

- 2 retained as 'High' ratings due to number of recorded incidents
- 1 reduced to 'Medium' risk following resident relocation within Unit
- 3 reduced to 'Low' risk with nil or near zero recorded incidents
- 2 'High' ratings relating to 'Developmental' risk retained due to lack of sensitivity of incident recording systems for this domain

Of the previous 18 ratings of 'Medium' risk:

- 1 rating increased to 'High' due to number of recorded incidents
- 4 ratings relating to 'Destructive behaviour' domain reduced to 'Low' with nil or near zero recorded incidents
- 13 ratings relating to 'Intimidation /Emotional harm' reduced to 'Low' with nil or near zero recorded incidents

Existing service risk management strategies were never at any point reduced during the pilot of the AIR tool, irrespective of incident recordings or risk rating reviews.

Second and final incident review (27<sup>th</sup> Oct 2010 - 17<sup>th</sup> February 2011). A total of 62 recorded incidents:

- 57 relating to 'Intimidation/Emotional harm' domain
- 2 relating to 'Aggression /Physical Harm' domain (both 'mild' forms )

- 2 relating to 'Destructive Behaviour/ Damage to property' domain
- 1 relating to 'Developmental' risk domain

Review of risk ratings in light of recorded incidents resulted in the following amendments to risk ratings:

- 3 ratings of 'High' risk retained, in light of number of recorded incidents
- 1 rating of 'Medium' risk retained
- 2 ratings of 'Low' risk retained
- 5 ratings of 'Low' risk raised to 'Medium' risk due to number of recorded incidents
- 2 ratings reduced from 'High' to 'Medium' risk

#### *A.I.R. Evaluation questionnaires*

A total of seven evaluation questionnaires were returned by staff. There were eight questions in the evaluation and these were rated a scale of 1-7, where 1 was the lowest rating and 7 the highest.

Staff were asked to rate the following:

- knowledge and ease of use of the Assessment of Interpersonal Risk Profile
- quality and accuracy of information gained by staff
- likelihood that regular use of the Assessment of Interpersonal Risk Profile would reduce risk of serious incidents involving two service users
- extent to which AIR assessment helped develop effective risk rating and management plans for those individuals assessed

Suggestions for improvements were also requested on the evaluation form.

All responses to questions on the evaluation form were in the range 4-6, with mean rating score of 5.4. Specific recommendations for improvement fell into two categories (a) recommendations that the assessment could be used across different residential services and in different settings (b) that use of the A.I.R. required care staff with robust clinical knowledge of the individuals being assessed.

The involvement of direct care staff from the outset of the pilot was crucial to the any positive outcomes. Care staff reported continuously throughout the pilot and on evaluation that they greatly valued being part of the entire process.

## Discussion

This small-scale study piloted and evaluated a new risk assessment tool, the Assessment of Interpersonal Risk (AIR) in an assessment and treatment unit for adults with learning disabilities who had severe and enduring mental health problems and/or behaviour that is severely challenging. The aims of the study were to enhance existing risk assessment procedures and to improve staff skills in making defensible decisions about reciprocal risk between any two given individuals.

There was an increase in recorded incidents from a total of 26 over the first four months to 62 over second four months of the study. Such a significant increase was initially disturbing, both for care staff and for researchers. In discussion with staff, however, this increase was attributed to a combination of factors: more vigilant care staff recording during the second half of the pilot; a 'honeymoon' period of settling in to new unit at the beginning of the project; and more changes in resident 'mix', with a greater number of residents in the unit during the second half of the pilot.

The review of risk ratings, in light of recorded incidents, demonstrated the need for good responsiveness in this, or any other risk assessment procedure. The risk ratings were adjusted, from High to Medium for example in response to changes in circumstances of one or more individuals' circumstances. The five domains in the AIR allowed staff a more sophisticated means of analysing both past and future incidents. The recorded incidents identified the individuals and categorised incidents into one of the five domains of the AIR, and the probability of similar incidents with the same precursors could then be more accurately calculated.

For example, location of bedrooms within the assessment and treatment unit changed for the five individuals in the pilot. Both initial risk assessment and subsequent incident analysis identified a compatibility issue between two of the female residents for the Intimidation/Emotional domain especially. When there was a degree of 'separation' of living arrangements within the unit, incidents were relatively low frequency, but when the two women had to be accommodated in nearby rooms, recorded incidents increased noticeably. Previous assessment using the AIR allowed staff to plan appropriate risk management strategies to address this, which reduced incidents proportionately from 20 in one month, to less than 10 in a three month period of review.

Similar analysis for other individuals and other incidents allowed a reduction in the number of the 'High' risk ratings. Of the original eight 'High' risk rating one was reduced to 'Medium' risk and three were reduced to 'Low' risk.

A specific 'Developmental' risk recording format and guidelines were devised six months after the start of the project, in response to the identified need to measure risk in this domain more effectively. This change came too late in the pilot to assess the impact. There was, however, a raised awareness in care staff about not allowing compromises to individuals' therapeutic activities purely because of behavioural challenges of others. There was only one recorded incident in this domain, when a resident self excluded from an activity because of the presence of a fellow resident whom she disliked.

Accurate risk assessment in this domain is especially important in congregate settings, where challenging behaviour can frequently disrupt or prevent individual and group activities from taking place, and thereby reduce the quality of the care and quality of service provided.

In this pilot study the AIR was not tested for predictive validity, but did show some promise in the assessment of the 'Intimidation/Emotional harm' domain risk levels, which were later supported by recorded incidents relative to that domain.

The AIR informed some existing risk management strategies, most notably observational and procedural risk management during mealtimes, when the five individuals were assessed on the 'Destructive behaviour/Damage to property' domain, and particular interpersonal risks were identified.

#### *Recommendations for improvement*

This was a pilot study to evaluate the AIR tool, conducted by NHS Fife and the University of St Andrews and funded as a Knowledge Transfer Partnership by the Technology Strategy Board. This arrangement had a number of advantages for piloting such a measure in a health service setting, including the funding arrangements, the formality of the structure, its time limited parameters and its well principled, organised and governed evaluation approach.

This pilot study was conducted within very tight deadlines, to coincide with the opening of the new assessment and treatment unit. This did have the advantage of piloting the tool in a new setting for all of those involved, with the enthusiasm that this brings. There were, however, inevitable teething problems with a new building, new residents and a new staff team. For example, internal doors being ripped off bedrooms might be interpreted as increased levels of aggression and higher risk assessment, when in fact it signified only poor quality hinges in a new building. A longer term study will be necessary to repeat this evaluation when the residents and staff are more familiar and comfortable with the setting.

Just five residents were involved in this pilot, when there was double that number living in the assessment and treatment unit at the time. It could be argued the interpersonal risk assessment should have been done across *all* residents in the unit. This was not done for two main reasons. The first was expediency; it would not have been possible within the available staff time and resources to have done the very high number of risk ratings required across the five domains for ten people. The second reason was how well these findings could be generalised; evidence-based models of care over the past 30 years strongly suggest that grouping people with learning disabilities and challenging behaviours results in negative effects in terms of the quality interactions and the outcomes they experience (Emerson, McGill & Mansell, 1994; Mansell & Beadle-Brown, 2004). All of the individuals selected for interpersonal risk assessment analysis in this study will eventually be living in community settings with fewer other people. Ideally, this would be individual tenancies for each of these five people, but realistically the cost of such packages of care have become prohibitive, and two, three or four people sharing accommodation is far more common (Mansell, 2006). It is with this in mind that the AIR was developed and piloted; the importance of assessing interpersonal risk *between* residents will be as important as the more usual *individual* risk assessments conducted to assess potential hazards in a given setting and the likelihood of harm to or from an individual.

It may not be necessary to assess all individuals in any setting using the AIR. The tool has potential utility particularly in times of heightened or prolonged risk circumstances. For example, it may be of particular value for in-patient crises and planned admission services where there is frequent changes in resident occupancy.

Whilst the care staff who were the “named individual” for the five individuals taking part in the pilot were more informed about the application of the assessment tool, other members of the staff team had an awareness, but a less robust working knowledge of its application. Future use of the assessment should ensure, through training, a working knowledge of the tool across all of the staff team, to avoid problems with key staff changes and/or availability.

### *Conclusion*

In this pilot study four of the five domains in the new risk assessment tool were sufficiently sensitive to meet the individual and clinical governance needs within the unit. The ‘Developmental’ domain was further developed during the course of this pilot, in response to feedback.

Gaining and keeping the commitment of care staff on this project was crucial. The validity and reliability of the AIR is clearly very important, and needs further investigation, but this

risk assessment tool will simply not be used without staff belief in its utility. Feedback from staff on evaluation questionnaires was generally very positive and showed confidence in the AIR. Staff supported the prospective use of the tool to measure compatibility between individuals. Additionally, care staff considered that the assessment could usefully contribute to discharge planning and service commissioning processes. The tool is most suitable for use with small groups; it would not be practical to carry out the great number of risk ratings across the five domains for larger numbers.

In the assessment and treatment unit there was a raised awareness and understanding of individual 'compatibility' and associated interpersonal risk issues. There is a wider appreciation of the need for defensibility of responsive risk assessment and risk management within and across services.

Adults with learning disabilities who have severe and enduring mental health problems and behaviour that is severely challenging is a relatively small, but resource intensive population. There is a need for validated risk assessments tools to assess interpersonal risk and compatibility between these individuals, as services are commissioned and/or re-designed to accommodate and support them in community settings.

The feasibility of piloting this new risk assessment tool, to further test validity and reliability is now being investigated.

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