yewdaleKestrel®
MAGNETIC ANTI-LIGATURE SYSTEM

Tough Questions Asked
On Robustness Testing At Anti-Ligature Workshop

The issue discussed in the third Design In Mental Health Network (DIMHN) / Building Research Establishment (BRE) anti-ligature standards workshop was about robustness testing, and how to build a product that will not become dangerous if used incorrectly.

This is a different angle to previous discussions that previously looked at how a system can qualify as anti-ligature and the environments it is suited to.

The robustness of an anti-ligature product is paramount to its protective quality. A system must be strong enough to not be damaged by a service user or through regular use (which leads it to becoming dangerous or totally useless). At the same time, it must not be so tough that it can be used to damage the room, other people or the service user themselves.

It is a conundrum that had the room, which consisted of manufacturers, architects, facilities managers and many others involved with anti-ligature systems and mental health care, applying their minds and years of experience.

The problem with testing robustness is the fact that it is multifaceted. The distance between testing for damage caused from regular use right through to intentional sustained attack is huge. It requires knowledge of previous attempts by service users to begin drawing up a testing regime rigorous enough to confidently claim a product can safely meet a certain risk level.

During the workshop we heard how fire alarms and connecting wires have been ripped through the ceiling, toilets flooded through intentional blockages and even instances of urine-soaked toilet paper being dried behind radiators to cause crystallisation and rigidity that allow it to be used as a sharp object.

Whilst this has little bearing on a weight-releasing anti-ligature product such as YewdaleKestrel®, it highlights the sheer extent that some service users will go to to cause themselves or others harm. To consider a system being used well outside of the realms it was designed to be used for requires much thought, and the discussions were lengthy and very informative.

Another consideration is how systems are used against one another to create a potentially dangerous situation. For example, if a removable curtain track successfully fails when weight is applied, this is considered good, as it prevented a ligature point. A similar item would be a door vision panel or a sliding bedroom window – they successfully serve their purpose and remove a potential ligature. Yet if the room itself is not built to negate the mis-use of said curtain track, vision panel or sliding window once it has been removed from its fixings, this is a serious issue.

A room with perhaps a recess wide enough to jam the curtain track into could allow the user to harm themselves. Likewise, the vision panel flaps can be smashed to bits and the sharp fragments used dangerously or the edging dented to create a ligature point, or the sliding window's rollers can be jammed, forming a ligature point.

Therefore, it is important to ensure that the anti-ligature systems are specified to suit the rooms they will be installed into. Consideration must be given to any other safety systems and the design of the room so that they cannot be used together to create a potential danger. In essence, the system needs to be totally useless in the room for anything other than the sole purpose it was designed for.

The conversations were honest and to the point, with many representatives from the industry present. There was no sales pitches or competitive behaviour between any businesses, and this serves as a credit to the organisation and the pursuit of a set standards to provide genuine help for Trusts and service users.

As was reported in our previous article on the workshops, anti-ligature systems are currently created to suit the needs of health care environments, based on feedback in discussions, and are often quite specific to those areas. The systems are then tested by the manufacturer and then by the Trusts to their own standard, which inevitably varies from one Trust to the next.

With 84 Foundation Trusts and 54 Mental Health Trusts in the country, an anti-ligature system potentially faces being tested 138 times to see if it is of use or up to each Trusts' standards. This is not including any testing conducted by the manufacturer. The process is costly and time consuming, slowing innovation and ultimately delaying the installation of vital systems.

There is a fundamental lack of an industry-wide standard of testing, meaning no two anti-ligature systems meet the same requirements in a clearly defined way. What's more, the sheer array of systems available can be confusing for installers, who may not be fully aware of what the service user's specific requirements are and the extent to which some will go to form a ligature point.

Testing for robustness is a notoriously tough task, with everything from crowbars to paving mauls being used against doors and windows. Whilst no service user should ever be in a situation to wield such items during their time in the care of the trust, it does highlight the strength of the products on the market. Others, such as the YewdaleKestrel® en-suite Safedoor goes to the opposite end of the spectrum and is made of foam and held up by magnets. Yet this is still rigidly tested to ensure the fabric cannot be picked and tampered with and that it cannot be used as a barricade.

Once the session came to an end, and the notes were gathered up, DIMHN and BRE had the unenviable task of extracting the information to help them draft a set of standards that apply to all anti-ligature systems used in the UK.