The use of technology to support children and young people experiencing domestic violence and abuse during the COVID-19 pandemic

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Reflections on the use of technology to support children and young people experiencing domestic violence and abuse during the COVID-19 pandemic: A rapid Failure Modes and Effects Analysis (rapid-FMEA).

Short piece for the Policy and Practice section with the special issue on the COVID-19 Pandemic and Gender-Based Violence.

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Technology is an ever-increasing part of most people's lives. Despite its intended benefits, technology also provides domestic violence and abuse (DVA) perpetrators with new and growing opportunities to continue or escalate their abusive behaviours. ~~However~~ pParadoxically, this same technology has been crucial for the delivery of support by DVA services during the COVID-19 pandemic. This paper draws upon the experiences of a specialist DVA service for children and young people in the United Kingdom (UK), reflecting on their use of technology in service delivery during the COVID-19 pandemic. We applied a safety systems approach traditionally used in health care, failure modes and analysis (FMEA) to anlyse~~We describe~~ how previous service models of predominantly in-person support were unable to continue and the measures taken to overcome these changes. With the closure of schools and community venues, telephone support and video conferencing (rarely used pre-COVID) have enabled children and young people to continue accessing support. This was vital given the significant increase of DVA throughout the pandemic. ~~Services have been able to remain accessible and continue to help children and young people keep safe and develop coping strategies. The use of video conferencing also provided potential solutions to an issue present before the pandemic regarding the delivery of group work programmes.~~ Whilst the utilisation of technology has helped overcome barriers created by the COVID-19 pandemic, risks have also been associated with its use. A rapid-FMEA shed light on these ~~Services have struggled to fully assess~~the risks within the environment in which children and young people engage with remote, digital-enabled support. Practitioners have been unable to determine whether other people, including the abusive parent or partner, were present within the room, but out of sight. Uncertainty also remains with the use of text messages to support children and young people; the absence of verbal and non-verbal cues means much is left to interpretation and assumption, which can be dangerous. ~~The lessons learned and reflections shared within this paper will be of interest to specialist practitioners supporting children and young people experiencing DVA and operational managers designing current and future services.~~

The FMEA generated 13 'corrective actions' that will be helpful to specialist practitioners supporting children and young people experiencing DVA and to operational managers modifying current services and designing those for the future.

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Reflections on the use of technology to support children and young people experiencing domestic violence and abuse during the COVID-19 pandemic: A rapid Failure Modes and Effects Analysis (rapid-FMEA).

Introduction

This article draws upon the experiences of a specialist domestic violence and abuse (DVA) service for children and young people in the United Kingdom (UK), reflecting on their use of technology in service delivery during the COVID-19 pandemic. The lessons learned and reflections shared within this paper will be of benefit to specialist practitioners supporting children and young people experiencing DVA and also operational managers designing current and future services. There have been both benefits and risk to the use of technology during the COVID-19 pandemic, however not all risks warrant the same level of concern or response. A rapid failure modes and effects analysis (rapid-FMEA) has been completed to highlight considerations when deciding whether to use technology to support children and young people experiencing DVA.

Technology and DVA

Technology is an ever-increasing part of most people's daily lives, especially children and young people (CHILDWISE, 2013; Livingstone & Bober, 2005; Stonard *et al*, 2015). Mediums such as mobile phones, social media, and video calls enable inexpensive methods of communication which has redefined young people's relationships and social networks (Bryant, Sanders-Jackson & Smallwood, 2006; Stonard *et al*, 2015). Access to technology can also be a useful tool for women and children experiencing DVA, enhancing their safety and supporting their recovery (Fraser *et al,* 2010; Southworth *et al*, 2005; Woodlock, 2017). For example, ~~Launched in October 2015,~~ the Hollie Gazzard Trust have created a smartphone app which provides a range of safety features (Hollie Gazzard Trust, 2021). If the user feels unsafe, they shake their phone which sends an alert to warn designated contacts that they may be in danger. This app also records both audio and visual footage of what is happening for later use (Derbyshire Constabulary, 2019). Settings such as emergency departments have also utilised technology, with some in Australia introducing touch-screen computers to assist in screening for DVA, resulting in significant increases in the identification of abuse (Hawkins *et al*, 2009; Rhodes *et al,* 2002; Rhodes, Lauderdale & Stocking, 2001).

Despite its intended benefits, technology can also enable or exacerbate gender based violence (GBV), providing DVA perpetrators with new and growing opportunities to continue or escalate their abusive behaviours. Perpetrators can use technology to create a fear that they will always be present within their victim's life (Woodlock, 2017). Technology-facilitated DVA is not necessarily a distinct form of abuse from that perpetrated in-person; but technology offers perpetrators another medium to continue controlling, stalking or harassing their victim (Al-Alosi, 2017; Fiolet *et al,* 2021). It is often an extension of what is already being perpetrated within the relationship (Harris & Woodlock, 2019; Lyndon, Bonds-Raacke & Cratty, 2011). These forms of DVA can occur 24 hours a day, no matter where the victim is, and can include a range of controlling and coercive behaviours such as: putting women under surveillance, threatening phone calls, checking messages, cyber-stalking, harassment on social media, tracking locations, and sharing intimate images ~~(revenge porn)~~ (Al-Alosi, 2017; Stonard *et al*, 2015).

COVID-19

Although technology can provide perpetrators with more tools and opportunities to control and intimidate women and children, services providing specialist support to children and young people experiencing DVA have found technology crucial in enabling their support to continue throughout the COVID-19 pandemic. Incredible strain has been put on violence against women and girls (VAWG) service providers due to mandatory restrictions imposed by multiple lockdowns (UN Women, 2020; Grierson, 2020; Women's Aid, 2020). These restrictions have caused significant concerns around increased risk for women and children left isolated within abusive households globally (Bradbury-Jones & Isham, 2020; Campbell, 2020; Usher et al., 2020). In the UK, the National Domestic Abuse Helpline saw a 25% increase in calls as a result of the pandemic (Kelly & Morgan, 2020). This increase in demand was experienced globally, with most countries also reporting increases in calls to their DVA helplines, for example: 40% in Malaysia, 50% in China and Somalia, 79% in Colombia and a significant 400% in Tunisia (UN Women, 2020).

Whilst specialist DVA services for children and young people did not see this increase (Donagh, 2020), they experienced exceptional strain trying to continue delivering their support, given the limited opportunities for meeting in-person. Due to national shortfalls in services for children and young people experiencing DVA (Humphreys & Mullender, 2015; Radford *et al*, 2011), specialist services continue to have significantly high numbers of young people waiting for support. Schools provide DVA practitioners with a safe and controlled space in which they can engage with young people seeking support. The closure of schools during the pandemic

meant services were left with little to no opportunity to meet with children and young people in-person, meaning they had to adapt their approach to support, and furthermore their overall service model, in line with Government guidelines. This is where the use of technology has proven crucial.

Technology-enabled support

With the closure of schools and community venues, telephone support and video conferencing (rarely used pre-COVID) have enabled children and young people to continue accessing specialist support. Services have been able to remain accessible and continue to help children and young people experiencing DVA keep safe and develop coping strategies. Following thorough risk assessments, practitioners have been able to hold virtual support sessions on a weekly basis, continuing to provide children and young people with the opportunity to talk through their experiences. Telephone support has been particularly successful with older young people (13-17) as well as children and young people who struggle with social skills such as eye contact. Video conferencing in comparison has been particularly useful for younger children (5-12) –as well as children and young people who prefer to see the person they are speaking too.

Delivering group work programmes using video conferencing, for example, has meant delays to groups being establish drastically reduced, as young people could join from any geographical location. In addition to this, DVA services saw an increase in attendance alongside less children and young people dropping out during the course. While video conferencing removed the opportunity to complete smaller-group activities using arts and crafts, the use of breakout rooms and electronic whiteboards ensured these activities could still be completed. Multiple agencies within the VAWG sector have taken a similar approach with the creation of an online version of The Freedom Programme (The Freedom Programme, 2021), and Victim Support expanding their I Matter programme to be delivered nationally using video conferencing to women experiencing DVA (Charity Today, 2021). Whilst the utilisation of technology has helped overcome some of the barriers created by the COVID-19 pandemic, limitations and risks have also been associated with its use, which have been considered within this rapid-FMEA.

Methodology

There have been both benefits and risk to the use of technology during the COVID-19 pandemic, however not all risks warrant the same level of concern or response. FMEA is widely

used a systems approach to analyse safety and quality across a range of topics, with particular recent application in health systems where patient safety is paramount (Simselker). ~~A rapid-FMEA has been completed to highlight considerations when deciding whether to use technology to support children and young people experiencing DVA~~. Ultimately, a FMEA enables the identification of potential risks or vulnerabilities within complex processes and furthermore the generation of remedial actions (Armitage, Taylor & Ashley, 2012; Ashley, Armitage & Taylor, 2016). This prospective quality assurance methodology originated within the military, has been developed in a range of industrial settings, and is now being increasing used within healthcare settings (Armitage *et al,* 2011; Ashley *et al,* 2011). Despite its considerable use within healthcare, FMEA has not been used to appraise and quality assure a process within a specialist DVA support service. A rapid-FMEA was completed to highlight considerations when deciding whether to use technology to support children and young people experiencing DVA. This analysis ~~has~~ enabled a retrospective review of the risks identified by a specialist DVA service when using technology during the COVID-19 pandemic to support children and young people experiencing DVA; the FMEA~~its~~ findings have enabled the creation of remedial strategies to counteract these anticipated or potential risks before they happen in the future.

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FMEA Team

It is recommended that FMEAs are completed by multidisciplinary teams, who are able to offer differing perspectives to provide a more comprehensive analysis. Given that this was~~is~~ a rapid-FMEA the team is smaller than recommended, however could still provide a range of perspectives on the topic. One team member (JT) also had previous experience of FMEA, being the first to use it to analyse a social care process (Ashley, Armitage & Taylor, 2016).

The Process

The FMEA team followed the sequential five stage process of completing a FMEA (Ashley *et al*, 2011):

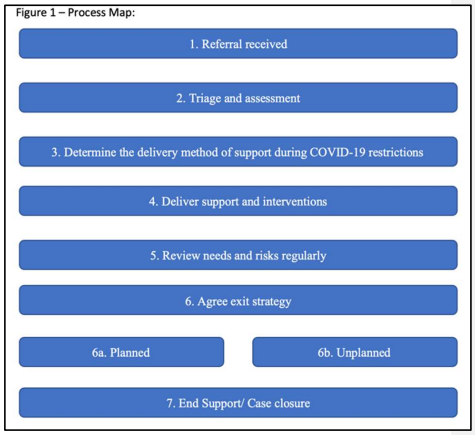
1. Map the process under evaluation to identify its component steps,
2. Identify failure modes (potential risks) for each step,
3. Numerically score the failure modes to prioritise them according to the risk they pose,
4. Identify possible causes for the highest-risk failure modes,
5. And generate corrective actions to address these.

Within this rapid-FMEA, the team made a decision to modify step three as it was not deemed desirable to numerically score and prioritise the failure modes. Traditionally, this would be done based on their severity, occurrence and detectability, producing a risk priority number (Armitage *et al,* 2011). Instead, each failure mode was given a RAG (Red, Amber, Green) rating following considerations in two key factors: (1) the potential risk of harm they cause for the children and young people accessing support, and (2) the impact they have on their ability to engage in support.

Findings

Step One: Process Mapping:

The process for using technology during the COVID-19 pandemic to support children and young people experiencing DVA was mapped out in seven main steps. This was from the point of a referral being received to case closure. The sixth step 'agree exit strategy' had two potential sub-steps; 'planned' when support has been delivered and it is coming to a natural case closure, and 'unplanned' where support has had to be called to an end by the practitioner due to identified risks or concerns.



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Step Two: Identifying Failure Modes:

In total, 14 failure modes were identified (~~see~~ figure two); the majority of these were found within process steps three and four. For example, in step four 'deliver support and interventions' there were 10 failure modes identified. These included: technology failing, the perpetrator being in the room (both hidden or visible), not being guaranteed confidentiality, and the non-abusive parent being present or taking over the support session.

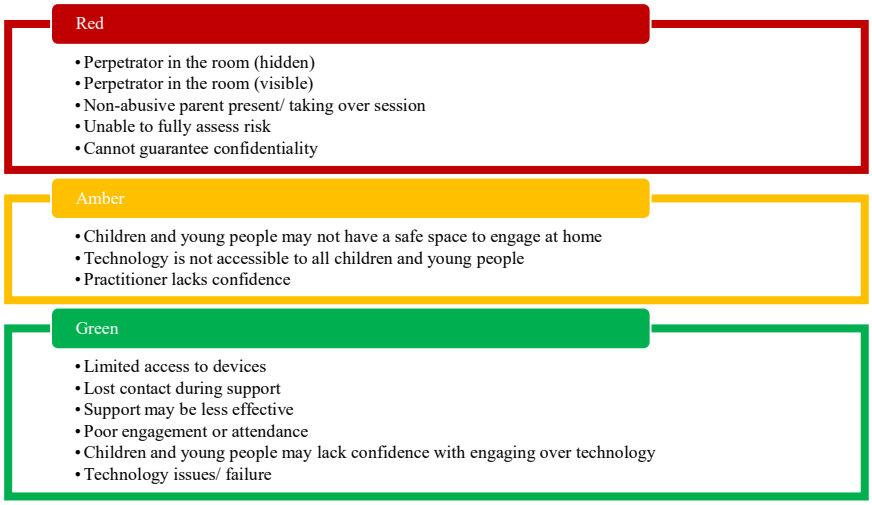
[insert Figure 2 here]

Step Three: RAG Rating the Failure Modes

Each failure mode was considered in regards to both the potential risk of harm they would cause for the children and young people accessing support, and the impact they have on their

ability to engage in support. Each were then given a RAG (Red, Amber, Green) rating ~~—see~~ (figure two). The failure mode of having the perpetrator in the room with the young person while they are accessing technology-enabled support, for example, has been given a red rating. This was given due to their presence meaning there is a high potential for further or escalating abuse to take place and support being too risky to continue.

Figure 2 – RAG Ratings



Step Four: Identifying Causes

Twenty-seven individual causes were identified for the failure modes, some being applicable to more than one failure mode. Some of the causes were identified at the individual level, including the behaviours of the perpetrator (i.e. the need for power and control, or monitoring and controlling of devices by the perpetrator). At an– organisational level, policies and procedures caused or worsened failure modes, for example services being restricted to using one specific platform which was not as accessible for families to download and use as other available platforms.

Step Five: Generating Corrective Actions

A total of 13 corrective actions were created (~~see~~ figure three). These changes focussed on frontline practice, training and awareness, multi-agency working and internal policy and procedures. For some failure modes there are more than one possible corrective action. For example, where there are concerns around the perpetrator being present the first corrective action is preventative, whereby practitioners should complete extensive assessments, thoroughly assessing the environment in which the child or young person is in when receiving the technology enabled support, ensuring they are in an appropriate environment to speak openly, without the presence of the perpetrator, or any other person. If this doesn't work or is not possible, then they should consider the child or young person accessing the technology enabled support within a school setting where the risk of the perpetrator being present is removed. If this is not a possibility, then the support cannot safely continue, meaning there must be an unplanned exit from service. Even though some failure modes do not have corrective actions, they remain important for practitioners to be aware of when delivering technology-enabled support.

[inser figure 3 here].

Figure 3 – Corrective Actions

Failure Modes	**Causes**	**Corrective Actions**
Perpetrator in the room (hidden)	- Power and control	Complete extensive assessments, thoroughly assess the environment in which the child or young person is in when receiving these calls, ensure they are in an appropriate environment to speak openly, without concerns of the perpetrator, or any other person, being present, and establish clear boundaries and expectations.
		Introduce codewords for safety with the children and young people.
		Children and young people access the technology enabled support within a school setting
		Support cannot safely continue – unplanned exit
Perpetrator in the room (visible)	- Power and control	Complete extensive assessments, thoroughly assess the environment in which the child or young person is in when receiving these calls, ensure they are in an appropriate environment to speak openly, without concerns of the perpetrator, or any other person, being present, and establish clear boundaries and expectations.
		Introduce codewords for safety with the children and young people.
		Children and young people access the technology enabled support within a school setting
		Support cannot safely continue – unplanned exit
Non-abusive parent present/ taking over session	- Over-protective - Concerned disclosures will be made	Establish clear boundaries and expectations at the start of support
		Address concerns immediately as they arise
Unable to fully assess risk	- New risk assessments needed creating to consider new risks associated with using technology - Practitioners reliant on what they are being told to be factual - Unable to pick up on body language and non-verbal cues through technology	Complete extensive assessments, thoroughly assess the environment in which the child or young person is in when receiving these calls, ensure they are in an appropriate environment to speak openly, without concerns of the perpetrator, or any other person, being present, and establish clear boundaries and expectations.
		Multi-agency discussions and information sharing
		Training for practitioners on safeguarding children and young people when delivering support through technology
Cannot guarantee confidentiality	- Other people in household overhearing - Lack of a private area	Children and young people access the technology enabled support within a school setting
		Support cannot safely continue – unplanned exit

Children and young people may not have a safe space to engage at home	- Living with perpetrator - Parents unaware of support - Perpetrator controlling or monitoring devices	Complete extensive assessments, thoroughly assess the environment in which the child or young person is in when receiving these calls, ensure they are in an appropriate environment to speak openly, without concerns of the perpetrator, or any other person, being present, and establish clear boundaries and expectations.
		Introduce codewords for safety with the children and young people.
		Children and young people access the technology enabled support within a school setting
		Support cannot safely continue – unplanned exit
Technology is not accessible to all children and young people	- Restricted choice in technology platforms - Age - Additional needs - Do not have means	Organisation to reconsider the platform of choice (i.e., select more commonly used one)
		Access devices provided during COVID-19 by local government
		Training for practitioners on engaging with younger children or children with additional needs through technology
		Children and young people access the technology enabled support within a school setting where technology is available
Practitioner lacks confidence	- Lack of training to deliver remote support - Lack of experience delivering remote support	Training for practitioners on engaging with children and young people through technology
Limited access to devices	- Shared devices - Perpetrator controlling or monitoring devices	Access devices provided during COVID-19 by local government
		Complete extensive assessments, thoroughly assess the environment in which the child or young person is in when receiving these calls, ensure they are in an appropriate environment to speak openly, without concerns of the perpetrator, or any other person, being present, and establish clear boundaries and expectations.
Lost contact during support	- Change in circumstances or risk - Easier to disengage when not in-person	
Support may be less effective	- Resources are limited when using technology (support usually involves a lot of arts and craft activities)	Make use of breakout rooms and electronic whiteboards within the technology to keep content creative and engaging
Poor engagement or attendance	- Easier to disengage when not in-person - Rely on adult to set up the technology	

Children and young people may lack confidence with engaging over technology	- Not comfortable with technology - Prefer support in-person	
Technology issues/ failure	- Internet failure - Old devices - Bad weather - Technology platform under maintenance	

Discussion

Whilst the utilisation of technology has helped overcome some of the barriers created by the COVID-19 pandemic when supporting children and young people experiencing DVA, limitations and risks have also been associated with its use. Completing a rapid-FMEA has enabled the identification of 14 potential risks or vulnerabilities with this approach to support; five of which have been deemed as 'Red Risks', meaning they carry the highest risk of harm for the children and young people accessing support or they significantly impact their ability to engage in support. This methodological process has resulted in the creation of 13 corrective actions, designed to prevent these anticipated risks from occurring.

Delivering remote support using technology makes the assumption that the children and young people accessing the service have the physical means to engage. Unfortunately, for some families this is a luxury that they cannot afford and therefore means that DVA services operating in this way reduce their accessibility. During the COVID-19 pandemic, the Department for Education within the UK helped with this limitation to an extent, providing laptops and tablets to more than 1.3 million children and young people; 4G wireless routers and SIM cards with data were also available to help with internet access (GOV.UK, 2021). While the primary purpose of these devices was to help with accessing online education, they also helped a number of children and young people engage with the technology-enabled support being delivered by specialist DVA services.

Some children and young people who do have access to technology still find telephone calls and video conferencing unsuitable to their individual needs, either by personal preference or current levels of risk. Some young people simply do not feel comfortable with these methods of support, preferring to meet the practitioner supporting them in-person; others may be living in circumstances where telephone support or video conferencing is not safe. Not all children and young people accessing support from DVA services are in households where the abuse has ended; technology-enabled support is not appropriate for young people still living with the perpetrator, experiencing ongoing abuse. This cohort of young people would likely experience the failure modes within our 'Red Risk' category, meaning the technology-enabled support may result in them experiencing further abuse. The rapid-FMEA has created a menu of corrective actions for practitioners to consider in these circumstances. When using technology enabled support, an extensive risk assessment process is essential where by practitioners need to thoroughly assess the environment in which the child or young person is in when receiving support calls. They need to ensure the young people are in an appropriate environment to speak openly, without concerns of the perpetrator, or any other person, being present. Where ongoing

concerns remain, it may be safer for practitioners to deliver the telephone support or video calls whilst the young person is in school; a safe and controlled environment where the perpetrator will not be present. Ultimately, if this is not possible, it is likely that technology-enabled support is not appropriate or safe meaning an unplanned exit from service is required.

Services have struggled to fully assess risk within the environment in which children and young people engage with technology-enabled support during COVID-19. Despite additional risk assessments being introduced during the pandemic, practitioners are not been able to know for certain if other people, including the abusive parent or partner, are present within the room but out of sight. For some, the presence of the perpetrator can be identified part way through support sessions. This raises concerns around potential intimidation, manipulation or additional stress for the children and young people. Practitioners may hear or see DVA perpetrators in the room with the children and young people. Some may be unsuccessful at trying to hide their presence from the practitioner, others make their presence known in the hope of intimidating the practitioner and reducing the effectiveness of their support. In these circumstances the session must be safely brought to an end, and safeguarding implications considered and acted upon. Even with remedial actions in place, these circumstances may still occur, hence this rapid-FMEA providing multiple corrective actions for some of the failure modes.

For some children and young people, their non-abusive parent, whom would not usually be involved with the support, may also be present in support sessions when they should not be. This has been a particular issue when using video conferencing to deliver group work programmes during COVID-19. Despite being informed that this cannot happen when completing the risk assessments, DVA practitioners may see inappropriate behaviours such as parents answering on the behalf of their child or coming into the frame of the camera during sessions. Not only does this cause disruption for their own child, but also the other children and young people in the group, potentially making them feel less comfortable with participating. Having a child's parent present also removes the confidential nature of the support, which is not acceptable. Confidentiality is of vital importance for children and young people accessing support from specialist DVA services. This rapid-FMEA indicates that establishing clear boundaries from the start could be one of the remedial strategies practitioners need to consider.

Conclusion

This article has shared the experiences of a specialist DVA service for children and young people who utilised technology in their service delivery during the COVID-19 pandemic. Technology was crucial for the delivery of support, with telephone support and video conferencing enabling children and young people to continue accessing their service. There have been both benefits and risk however to the use of technology during the COVID-19 pandemic, however not all risks warrant the same level of concern or response. The completion of a rapid-FMEA has been able to highlight considerations and suggest corrective actions for specialist DVA services deciding whether to use technology to support children and young people.

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