

Outcomes of Mental Health Screening for United Kingdom Nationals Affected by the 2015–2016 Terrorist Attacks in Tunisia, Paris, and Brussels

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Following several terrorist attacks in 2015 and 2016, a national program was set up to identify and support residents of England whose mental health had been affected. We report the outcomes of the program's screening and assessment components. Questionnaires and information about the program were mailed to 483 people and 49 families known to the police. Individuals who screened positive on an assessment for posttraumatic stress disorder, anxiety, depression, increased smoking, or problematic alcohol consumption were offered clinical assessment and referred to an appropriate National Health Service (NHS) service, if required. Of the 195 eligible people who returned our questionnaires, 179 (91.8%) screened positive on one or more measure. Following clinical assessment, 78 adults and three children were referred for treatment. The program was broadly successful in facilitating access to services. However, most people who had been directly exposed to the attacks did not participate and data protection issues limited communication with those who were affected. Further discussion of data protection concerns may help future programs operate more efficiently.

Up to 30% of individuals directly affected by a terrorist attack may develop a psychiatric disorder, such as posttraumatic stress disorder (PTSD), depression, generalized anxiety disorder, or phobias (Whalley & Brewin, 2007). Secondary victims, such as onlookers or individuals who provided assistance to those affected, and relatives of people who were killed or injured are also at risk of developing these conditions (Setti & Argentero, 2015; Weinberg, 2011). Unfortunately, many individuals who

develop a disorder following a terrorist attack do not actively seek care (Stuber, Galea, Boscarino, & Schlesinger, 2006). Because of this, National Institute for Health and Care Excellence (NICE) guidance on the detection and treatment of PTSD recommends that authorities responsible for developing local disaster plans consider proactively screening all affected individuals to facilitate access to services for those who might benefit from treatment (NICE, 2005). An example of this approach was the Trauma Response Program set up in the aftermath of the July 7, 2005, bombings in London, United Kingdom (Brewin, Fuchkan, Huntley, Robertson, et al., 2010; Brewin, Fuchkan, Huntley, & Scragg, 2010; Brewin et al., 2002; Brewin et al., 2008). In that program, a central screening team used a variety of methods to make contact with as many of the estimated 4,000 people who had been directly caught up in the attacks as possible to provide them with a short mental health screening questionnaire. Individuals who screened positive for any mental health disorder were invited to complete a more detailed assessment and referred for treatment when appropriate. In to-

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tal, 248 people were eventually referred for treatment. Only a small proportion of individuals who received care were referred by their general practitioner (GP); most were identified through outreach activities. Similar outreach programs have also been used following other terrorist attacks, such as 2011's Utøya massacre in Norway (Haga, Stene, Wentzel-Larsen, Thoresen, & Dyb, 2015).

In 2015 and 2016, terrorist attacks in Tunisia (at the Bardo National Museum on March 18, 2015, and in the city of Sousse on June 26, 2015), Paris (November 13, 2016), and Brussels (March 19, 2016) claimed the lives of over 200 people in total, 33 of whom were British, and affected many more. In response, the United Kingdom's government announced the establishment of a "screen-and-treat" program to facilitate access to appropriate National Health Service (NHS) services for those people whose mental health may have been affected. With the attacks having occurred overseas, those tasked with setting up this program faced new challenges, including the issue of how best to contact individuals returning to the United Kingdom. In this paper, we report the outcomes of the screening component of the program in order to identify lessons for future similar programs.

Method

Participants

The program was commissioned by the government of the United Kingdom to facilitate access to appropriate mental health services, where required, for all United Kingdom nationals living in England who were either (a) present at the time of one of the attacks and either witnessed the attack or were injured or bereaved as a result; (b) a contact (i.e., first-degree relative, household member, or partner) of someone killed or injured as a result of these attacks; or (c) in Tunisia at the time of the Sousse terrorist attack, but did not witness the attack.

Procedure

The screening component of the program consisted of two stages: a brief questionnaire (Stage 1) that was either self-completed (by adults) or completed by parents or guardians (for children and youths) and returned to the screening team at Public Health England (PHE), followed by a more detailed clinical assessment led by the Psychological Response to Traumatic Events (PRTE) service at the South London and Maudsley NHS Trust for individuals who screened positive on the questionnaire (Stage 2).

Because of the way information was initially collected, we were unable to find out the exact number of people who were both affected by the events in Tunisia, Paris, and/or Brussels and eligible for the program. The Metropolitan Police Service (MPS; i.e., the main police service for London) held contact details for the families of people injured or killed during the

attacks as well as for people who self-identified to the MPS when they left one of the affected countries. These contact details often represented heads of households. All individuals known to the MPS ($n = 49$ families and $n = 483$ individuals) were sent a screening pack that included a cover letter from the Department of Health, copies of the adult and child screening questionnaires, and an information leaflet. In addition, the official government web page relating to the attacks showed the leaflet and the questionnaires (including a web-based version for online completion). The website provided an opportunity for people to self-refer for screening.

Screening packs were distributed in three waves between March 1 and August 15, 2016. Postal reminders were later issued to all people contacted in the three waves. Recipients of the screening pack were advised to share details of the website and program with people they knew to be affected but who were not in receipt of a pack. Because of this, we do not know the total number of people who received a screening questionnaire.

Personnel from PHE scored the completed questionnaires, and outcome letters detailing proposed next steps were sent out to respondents within 1 week of questionnaire scoring. No further action was taken for individuals who screened negative. The PHE staff did not assess screening questionnaires returned for nationals of the United Kingdom who resided in Wales, Scotland, or Northern Ireland, but such questionnaires were passed on to the appropriate organizations within the respondent's country of residence. The contact details and screening questionnaire data for residents of England who screened positive were forwarded to the PRTE service. The PRTE staff then offered a clinical assessment within 2 weeks of receiving this information. For cases in which individuals did not respond to several contact attempts, letters with service contact details were sent, in case the individual wished to make contact in the future. People could opt to have the assessment completed by PRTE or by their local NHS community mental health team, which personnel from PRTE would arrange on the respondent's behalf.

Irrespective of the outcome of their clinical assessment, all individuals were offered follow-up appointments with PRTE. Follow-ups were typically arranged every 4–6 weeks, depending on clinical needs and the service user's preference. For individuals who were not assessed or referred, follow-ups were used to monitor symptoms and the need for clinical assessment. For people referred to local services for treatment, follow-ups ensured that individuals were able to access appropriate treatment and provided temporary support for those on waiting lists.

The assessment for adults was concluded with feedback, recommendations regarding treatment, and options for referrals to local services. A report was then completed within 1 week of assessment, and contact was made with the appropriate local NHS mental health services for treatment and follow-up appointments. People who consented to assessment but not treatment were provided with contact details in case they later wished to engage in treatment. For individuals who were al-

ready in treatment, the program was able to offer information and make a new referral if, for example, current treatment was not in line with NICE guidelines or an individual was not satisfied with his or her treatment. Treatment for children and youths was arranged through the local NHS-run Child and Adolescent Mental Health Service (CAMHS), with regular clinical supervision provided by PRTE personnel by phone, if requested by the CAMHS hub.

The screening closed on the October 31, 2016; personnel from PRTE followed up with individuals until March 2017 and had six further referrals after PHE closed the screening portal. All services were provided for free to individual patients as part of the taxpayer-funded provision of health care used within England. Ethical approval was not required for the service evaluation reported in this paper.

Measures

Stage 1: Initial screening questionnaires.

Screening questionnaires. The first stage of the assessment required people to complete one of four screening questionnaires. These were specific to (a) adults (18 years of age or older) present during the attacks, (b) adult contacts of someone who was injured or killed, (c1) youths 8–17 years of age who were either present for one of the attacks or a contact of someone who was, and (c2) children younger than 8 years of age who were either present for one of the attacks or a contact of someone who was. Because we were unable to obtain contact details of people who were in Tunisia at the time of the Sousse attack but did not witness the attack, no questionnaire was developed for this category.

PTSD. Adults were screened for PTSD using the 10-item Trauma Screening Questionnaire (TSQ; Brewin et al., 2002). Participants are asked to endorse those items they have experienced at least twice over the past week. Adults were defined as having screened positive if they endorsed six or more items on the TSQ. In our sample, Cronbach's alpha for the TSQ was .82.

Anxiety and depression. Anxiety and depression were assessed using the Patient Health Questionnaire–4 (Kroenke, Spitzer, & Williams, 2003; Kroenke, Spitzer, Williams, Monahan, & Löwe, 2007). The PHQ-4 scale contains a two-item assessment for depression and a two-item assessment for anxiety. Adults were defined as having screened positive if they endorsed one item on PHQ-4. In our sample, Cronbach's alpha was .77.

Smoking. Respondents answered one item asking whether they were smoking more than they had been before the attack. Adults were considered to have screened positive if they answered that they were smoking more.

Alcohol use. The three-item Alcohol Use Disorders Identification Test (AUDIT-C; Bush, Kivlahan, McDonell, Fihn, & Bradley, 1998) was used to assess alcohol consumption. The AUDIT-C is scored on a scale of 0 to 12, with higher scores indicating more alcohol consumption. Adults were considered to have screened positive if they scored 5 or more on the AUDIT-C. In the current sample, Cronbach's alpha was .82.

Assessments for children. Children younger than 8 years of age were screened using a six-item tool completed by their parents or guardians (Scheeringa & Haslett, 2010; Scheeringa, Zeanah, Myers, & Putnam, 2005). Younger children were defined as having screened positive if one or more items were endorsed. Children between 8 and 18 years of age were screened using an eight-item tool, the Children's Revised Impact of Event Scale (CRIES-8; Perrin, Meiser-Stedman, & Smith, 2005; Yule, 1997), which was either self-completed or completed by parents or guardians. Older children were defined as having screened positive if they scored of 17 or more on the CRIES-8.

Demographics and personal history. The Stage 1 questionnaires also included triage questions to help prioritize people for the second stage of the assessment. These questionnaires asked about current or previous membership in the armed forces, pregnancy, history of mental illness or self-harm, reported thoughts about suicide or self-harm, difficulties looking after children, risk to employment or schooling, and neurodevelopment delay in child respondents. We also asked about help-seeking behavior to date for any mental health problems related to the attacks.

Stage 2: Clinical assessment.

Clinical assessment. Adults who screened positive at Stage 1 were invited to complete a more detailed questionnaire, composed of several measures, through which we aimed to help tailor the clinical assessment to their needs. Completion of the questionnaire was followed by either a telephone or face-to-face clinical and risk assessment. The clinical interview included the PTSD Symptom Scale Interview (Foa, Riggs, Dancu, & Rothbaum, 1993) and assessment of psychiatric comorbidity. Participants were assessed for alcohol abuse and dependency if they had obtained a positive screen on the AUDIT-C tool. Personnel from PRTE also enquired about other family members affected by the event to coordinate assessment for the whole family.

Depression. The Patient Health Questionnaire–9 (PHQ-9; Kroenke & Spitzer, 2002), which uses a scale of 0 (*not at all*) to 3 (*nearly every day*) to assess items related to depressive symptoms over the last 2 weeks, was used to assess depression at Stage 2. Cronbach's alpha values for the PHQ-9 were .89 and .86 in its original validation study (Kroenke, Spitzer & Williams, 2001).

Anxiety. We used the Generalized Anxiety Disorder 7-Item (GAD-7; Spitzer, Kroenke, Williams, & Löwe, 2006) to assess anxiety in adults at Stage 2. On the GAD-7, participants are asked to rate items related to anxiety experienced over the last 2 weeks. This scale demonstrated a Cronbach's alpha of .92 in its original validation study (Spitzer et al., 2006).

Lifetime traumatic exposure. The Life Event Check List (LEC; Gray, Litz, Hsu, & Lombardo, 2004) was used at Stage 2 to assess for experience of other traumatic events. The 1-week test-retest reliability for the individual items in this questionnaire, each asking about experience of a different traumatic event, has previously been shown to be reasonable for almost all events ($\kappa > 0.5$; Gray et al., 2004).

PTSD. We used the revised Impact of Events Scale (IES-R; Weiss & Marmar, 1997) to assess PTSD at Stage 2. On the IES-R, individuals are asked to rate items related to distress caused over the last week by a life event on a scale of 0 (*not at all*) to 4 (*extremely*). The Cronbach's alpha value for this scale has previously been found to be .95 (Beck et al., 2008).

Posttraumatic cognitions. We used visual analogue scales to measure the degree of "coming to terms" with the event. Feelings of upset, anger, guilt, and shame were also assessed.

Functional impairment. The Work and Social Adjustment Scale (WSAS; Mundt, Marks, Shear, & Greist, 2002) was used to assess respondents' daily functioning. Individuals are asked to rate items related to functional impairment on a scale of 0 to 8, with higher scores indicating more severe impairment. Cronbach's alpha values for this scale were shown to be acceptable in several measures ($\alpha > .79$) in the original validation study (Mundt et al., 2002).

Children and youths. The parents or guardians of children and youths who had screened positive at Stage 1 were contacted by PRTE personnel to discuss options for further assessment and treatment, if required. The details of children and youths who requested further assessment and possible treatment were shared with the appropriate regional Child and Adolescent Mental Health Service (CAMHS) hub. Staff of the hub conducted the assessment face-to-face and offered treatment as appropriate. An assessment report and treatment plan was sent from the local CAMHS team to PRTE and the child or youth's GP.

Data analysis

In order to evaluate the outreach and screening components of the program, we assessed (a) the total number of people who responded to the invitation to be screened, (b) the percentage of respondents who screened positive on one or more of the questionnaires, (c) the percentage of individuals who had already accessed counseling or other treatments prior to screening, (d) the percentage of individuals who were eventually referred on for

treatment following the stage 2 clinical assessment, and (e) the uptake of supervision and training by local services. Due to the nature of the data collection, any missing data for the screening questionnaire were counted as responses of "no." There were no missing data for these clinical assessment outcomes.

Results

Screening

Figure 1 shows the flow of participants through the screening process. A total of 197 residents of England returned screening questionnaires. Of these respondents, two people were excluded because they did not complete the screening sections of the questionnaire and declined participation in the program. There were 142 respondents (72.8%) who were direct recipients of the questionnaire, 27 (13.8%) who were immediate family or associates of a direct recipient, and 24 (12.3%) who received the questionnaire through other means (information was missing for two people).

Of the 195 English residents with valid screening questionnaires, 166 (85.1%) were linked to the attacks in Sousse, two (1.0%) to Bardo, 18 (9.2%) to Paris, and nine (4.6%) to Brussels. A total of 159 (81.5%) were adults present at the time of the attack and 28 (17.6%) were adult contacts of people who were present. Eight questionnaires (4.1%) were returned for children and youths (one aged under 8 years and seven aged 8–17 years). Respondents were aged between 7 and 83 years (median: 50 years, interquartile range: 41–62 years). Of respondents, 119 (61.7%) were female. We identified 53 family clusters, comprising 131 people, among our respondents.

There were 179 respondents (91.8%) who screened positive to one or more of the screening tools. A breakdown of the number of people who screened positive for each tool is given in Table 1. Individuals who screened positive included 108 female (90.8%) and 71 male respondents (93.4%); this difference in proportion was not significant, $\chi^2(1, N = 195) = 0.4, p = .508$. All eight children and youths who returned questionnaires screened positive, but we do not know the total number of youths who were screened.

A similar proportion of those adults who were present during an attack and those adults who were contacts of someone killed or injured screened positive (91.2% and 92.9%, respectively). A larger proportion of female than male respondents screened positive on the TSQ (71.6% vs. 56.5%, respectively), $\chi^2(1, N = 171) = 4.12, p = .042$; PHQ-4 (99.0% vs. 78.3%, respectively), $\chi^2(1, N = 171) = 20.91, p < .001$; and smoking item (83.3% vs. 64.7%, respectively), $\chi^2(1, N = 41) = 1.87, p = .171$ sections. The only section in which a higher proportion of male than female individuals screened positive was the AUDIT-C (55.0% vs. 41.2%, respectively), $\chi^2(1, N = 171) = 3.19, p = .072$.

There were 70 adults and six children and youths who screened positive that had positive responses to one or more of the triage questions assessed in Stage 1 (see Table 1). A total of 72 adult respondents (38.5%) had not accessed counseling

Mental Health Screening After Terrorist Attacks

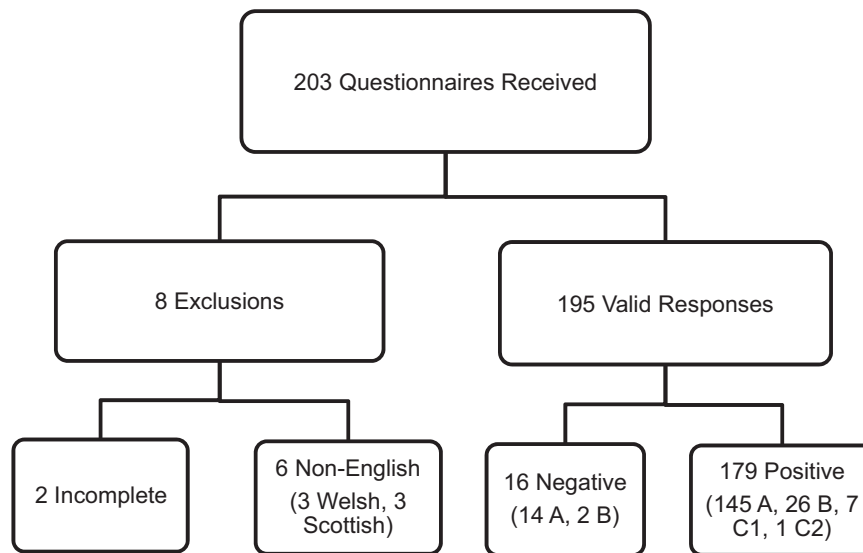


Figure 1. Flowchart of people invited to complete the screening questionnaire. “A” represents adults present at the attack, “B” represents adult contacts of people who were injured or killed, “C1” represents children and youths 8 to 17 years of age, and “C2” represents children under 8 years of age.

or other treatments prior to screening. Three children/youths who responded (37.5%) had not accessed counseling or other mental health services prior to screening. There were 78 people who had accessed brief counseling only, 6 had accessed “other treatments” only, and 31 had accessed a combination of counseling and other treatments. A total of 51 people were offered counseling through their tour operator for their visit to

Tunisia (an option which only applied to people affected by attacks in Tunisia) and 27 individuals had accessed counseling from multiple providers (e.g., their GP and a mental health charity). Of the 37 people who accessed other treatments, 31 had these services provided by their GP. Details about the nature of the other treatments were not collected as part of the screening process.

Table 1
Number and Percentage of Adult Respondents Who Screened Positive for Each Disorder and Endorsed Each Triage Question

	N	Participants Who Screened Positive	
		N	%
Psychiatric Morbidity			
Depression or anxiety (PHQ-4)	187	155	82.9
Posttraumatic stress disorder (TSQ)	187	112	59.9
Problematic drinking (AUDIT-C)	187	80	42.8
Smoking more (single item)	187	31	16.6
History of mental health problems	171	34	19.9
Thoughts of suicide or self harm	171	27	15.8
Risk to job	171	25	14.6
Difficulty caring for others	171	8	4.7
Employment in armed forces	171	7	4.1
Pregnant	171	1	0.6

Note. PHQ = Patient Health Questionnaire; TSQ = Trauma Screening Questionnaire; AUDIT-C = Alcohol Use Disorders Identification Test.

Clinical Assessment

Figure 2 shows the flow of respondents who were referred for clinical assessment. There were 172 adults who screened positive and were referred to PRTE for assessment, together with seven children and youths; this group of respondents included one person who screened positive as a child but had turned 18 by the time of the assessment. A further six individuals were referred to PRTE and did not participate in the initial screening.

Of the adults, 17 (9.6%) did not respond to repeated attempts to contact. Of the other 161, 30 (18.6%) were already in treatment at the time of contact, 20 of whom were participating in (66.7%) in NHS-commissioned services and 10 (33.3%) in non-NHS commissioned services. There were 115 (71.4%) adults contacted who named another person who may have been affected, and details for 60 other family members who may have been affected but were not directly invited to the screen-and-treat program emerged; these people were then invited to complete screening questionnaires. We were unable to contact a parent or guardian for one of the seven children referred for assessment. Of the six others, three were already in treatment and three were not.

Of those contacted, 119 (74%) adults were assessed by PRTE, 19 declined assessment, and assessment was not required for 23 because they were already assessed or booked for assessment

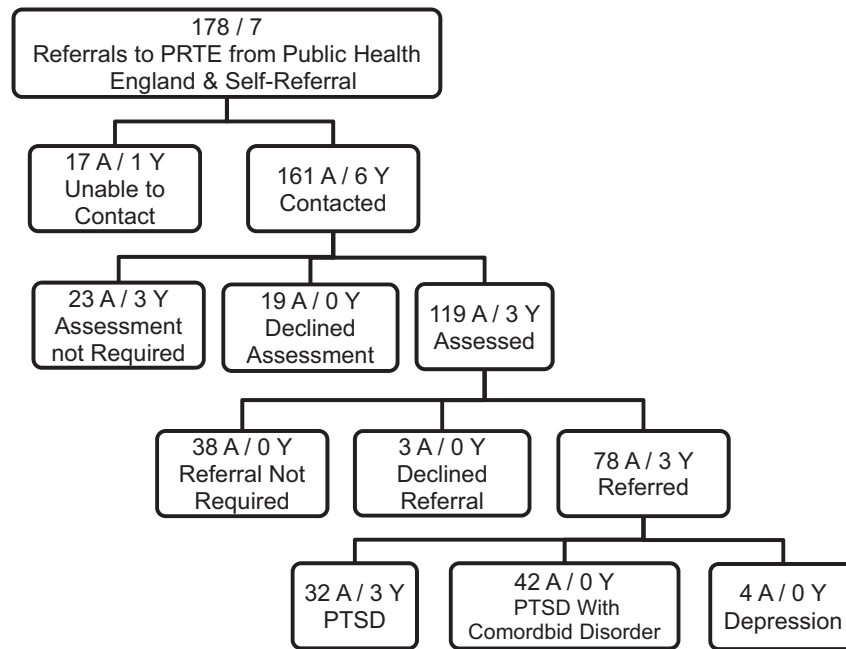


Figure 2. Flowchart of people referred for clinical assessment. Numbers represent adults (A) / children and youths (Y). PRTE = Psychological Response to Traumatic Events; PTSD = posttraumatic stress disorder.

with a local service. A summary of the number of people who reported a significant level of clinical symptoms on measures of PTSD, depression, anxiety, and impairment in functioning is presented in Table 2. Of the 19 people who requested delayed contact, 5 reported clinical symptoms but did not fill in the standardized measures.

Of the adults who were assessed, 78 (65.5%) were referred to local services, 74 of whom (94.8%) were referred with PTSD as their main difficulty (42 individuals in this group also had comorbid symptoms) and four (5.1%) of whom were referred with depression as their main difficulty. There were 41 adults who were not referred; 31 (75.6%) of these adults reported few or no symptoms and 7 (17.1%) were already in treatment (four NHS-commissioned, three non-NHS commissioned). Three (7.3%) individuals declined referral despite reporting symptoms. Three children were referred for assessment by PRTE for

trauma-related symptoms and were subsequently diagnosed with PTSD ($n = 2$) or significant symptoms of PTSD that were judged likely to improve with treatment ($n = 1$). Three children were not assessed by PRTE as they were already in treatment (two with NHS-commissioned services and one with non-NHS commissioned services).

Supervision and Training

Personnel from PRTE liaised with 51 local NHS services and offered supervision to all. Of these, 16 services (30%) took up the offer of supervision, including one CAMHS service. For adults, supervision was provided for both eye movement desensitisation and reprocessing therapy and trauma-focused cognitive behavioral therapy; this amounted to approximately 50 sessions covering 20 adult referrals. Some services required

Table 2
Preassessment Questionnaire Scores for Clinical Assessment of Adults

Disorder	Criterion	N	Participants Who Screened Positive	
			n	%
Posttraumatic stress disorder	Moderate to severe symptoms on the IES-R	119	86	72.3
Depression	Clinically significant level of symptoms on the PHQ-9	119	64	53.8
Anxiety	Clinically significant level of symptoms on the GAD-7	119	65	54.6
Functional impairment	Impairment on work, relationships, leisure or social activities on the WSAS	119	61	51.2

Note: IES-R = Impact of Event Scale-Revised; PHQ-9 = Patient Health Questionnaire; GAD-7 = Generalized Anxiety Disorder 7-Item; WSAS = Work and Social Adjustment Scale.

a limited number of supervision sessions whereas others were given more frequent supervision, sometimes fortnightly. Further support was also given in the form of consultations, which fell outside of recorded formal supervision. With respect to children and youths, 13 sessions of supervision were provided to one child who was referred. In addition, PRTE personnel provided training to one adult service, which had requested it.

Follow-Up

Personnel from PRTE carried out 485 follow-up contacts with 137 of the adults who were contacted (85%). Additionally, PRTE staff followed-up with all six of the children who were contacted. Of the adults, 15 (20%) who were referred required further contacts with PRTE psychologists before referral due to risk or clinical complexity.

Discussion

Following the terrorist attacks on tourists in Sousse, Tunisia, the UK Prime Minister promised that “we will do whatever it takes to help” the returning survivors (Merrick, 2015). The screen and treat program discussed in this paper was an integral part of the subsequent response to that incident and several others. The implementation of this program marks only the second time a bespoke centralized intervention has been developed in England to support the early identification and treatment of psychological disorders following a terrorist attack. The program ultimately resulted in 78 adults (40.4% of all adults who returned a questionnaire or self-referred) and three children (42.9%) being referred to local mental health services for evidence-based treatments. We cannot know what would have happened to these people had the program not existed; however, it is possible that many would have remained without treatment (Stuber et al., 2006). To this extent, we therefore view the program as a success in facilitating access to services.

The program’s importance is also highlighted by the very high prevalence among people who responded to our questionnaires who screened positive on one or more measures (91.8%). Although the representativeness of our sample is uncertain, it is clear that a substantial number of people continued to experience psychological morbidity resulting from the incidents roughly 1 year after they occurred.

One notable finding from the program was that 61% of adults who responded to the screening questionnaire had already accessed some form of counseling or other treatment prior to screening. This is in contrast to previous data suggesting that help-seeking behaviors among people affected by traumatic experiences tends to be low (Wang et al., 2005). One reason for this difference may be the longer delay, in this instance, between the attacks happening and our screening program being set up. Another important reason was the involvement, in this instance, of tour operators in proactively offering support to their customers. Indeed, in our sample, more people had accessed counseling via their tour operator than via their GP.

This, in turn, raises important questions as to the nature of this provision. Although 61% of respondents reported receiving some form of intervention, whether this intervention was in line with NICE recommendations (NICE, 2005) is uncertain. In particular, the provision of brief counseling has previously been highlighted as an area of concern, given evidence that it may cause more harm than good (Joyce et al., 2016); whether this was the modality used for people whose treatment was arranged through tour operators is unclear. Further discussion about how to integrate tour operators and NHS provisions for future incidents that occur overseas may be worthwhile.

The use of a centralized assessment service also produced several additional benefits. For example, NICE guidelines recommend coordinating treatment for family members after a traumatic event (NICE, 2005). Our assessment center facilitated this by (a) identifying additional friends and relatives who were originally unknown to the program team, (b) establishing family links between people despite differences in their family names and addresses, (c) helping to coordinate waiting times between members of a family, and (d) coordinating referrals of both children and adults into appropriate and convenient local services. The provision of training and supervision of local services by the centralized assessment team was also well received and, in some cases, intensively used. Similarly, our ability to follow-up with patients was important. The high number of follow-ups included monitoring symptoms, discussing treatment-related issues, normalizing reactions to anniversaries, and providing additional support and information. This was particularly important for high-risk and complex referrals; almost one-fifth of referred individuals required additional follow-ups before a referral to treatment could be made. This happened for a number of reasons, including risk to themselves, difficulty identifying appropriate local services, complex diagnoses, and a need for multiple referrals, with continuity of care supported by our team.

Despite the overall success of the program in reaching its objective of improving access to services, several limitations existed. First, we were unable to contact all individuals who met our inclusion criteria in order to screen them. The only accessible information on people affected by the terror attacks was the records held by the MPS. These records were not definitive as they relied on victims actively providing their details to the MPS; often, the details of only one person from a family unit had been recorded. Alternative sources, such as records from tour operators, may have helped to supplement this list, but they were unavailable due to data protection issues. The fact that 60 additional family members were only discovered during the clinical assessment stage underlines the difficulties encountered in identifying all affected individuals. It is likely that some people who may have benefited from the program were not contacted and remain unaware of the program’s existence. Our experience contrasts with the screen-and-treat program for the London bombings that occurred on July 7, 2005 (Brewin, Fuchkan, Huntley, Robertson et al., 2010), which was widely advertised in local and national print and to health professionals and for which

contact details of victims were obtained from a wide variety of sources in order to compile a consolidated list. The reliance on MPS records may also have skewed our sample toward people most severely affected by the attack, which may partly explain the high levels of positive screening results in our sample.

Second, the response rate for our screening questionnaire was poor. The MPS sent our questionnaire to 483 people and 49 families of whom they were aware. Because we do not know the size of the families or whether people who were contacted passed information about the program to other affected people as requested, we are unable to calculate a denominator for our response rate; however, we estimate it to be around 30%. The low response rate may be another partial explanation for the high levels of positive screening in our sample. Returning the questionnaire may have been viewed by recipients as a way to request help and hence as something that was unnecessary for people without symptoms, creating a systematic bias in which only symptomatic people felt motivated to return it. This was striking in children and youths, for whom 100% of returned questionnaires screened positive. Improving the response rate will be important for any future postdisaster mental health screening programs. Ensuring that screening is started earlier than was the case here, improving communication about the program by, for example, obtaining media coverage or celebrity endorsement, and solving the data protection conundrums that we encountered might all assist with this.

Third, due to data protection issues, the initial communication with affected people was done through the MPS on behalf of the U.K. Department of Health. An evaluation of the July 7, 2005, London bombings program suggested that people contacted through the MPS witness list as opposed to via other means were least likely to respond to a questionnaire and least likely to report being aware of the screening program, despite having previously received two letters about it (Brewin, Fuchkan, & Huntley, 2009). Contact of potential participants via government departments has also previously been shown to lead to a poor response rate in other contexts (Iversen, Liddell, Fear, Hotopf, & Wessely, 2006). The requirement that people be contacted through the MPS may therefore have contributed to poor response rates in this instance. Data protection issues are a commonly cited difficulty in both epidemiological studies (Iversen et al., 2006) and in the coordination of emergency responses (H.M. Government, 2007). Additional work to develop a standard operating procedure to facilitate data sharing for future screen-and-treat programs may be worthwhile.

Fourth, the low number of children assessed through our program was unexpected. Partly, this reflected the low number of children and youths who were present at the scenes of the attacks; however, children and youths who were relatives of victims were still expected to have been affected and were thus eligible for screening. The key barrier in this case may have been the need for children and youths to have questionnaires submitted on their behalf by a parent or guardian. It is possible that this was viewed as unnecessary by some parents, such as

those who may have thought that their children were unaffected or unlikely to benefit from psychological interventions. The fact that all children who were screened were identified as requiring assistance also suggests that parents and guardians perceived screening to be unnecessary unless they felt their child was in need of help. Detection of mental illness in children and adolescents affected by terrorist attacks might be improved in future programs by implementing a more comprehensive and proactive screening of all young people in the identified families. Potentially, brief psychoeducation materials about the impact of trauma on children provided in tandem with any initial screening questionnaire may also encourage more families to discuss the issue and return the questionnaire.

Since the terrorist attacks of 2015 and 2016, the United Kingdom has witnessed more attacks, in Westminster, Manchester, London Bridge, and Finsbury Park, as well as 2017's devastating Grenfell Tower fire. Similar screening programs to that which is reported here are in development, and further efforts will be required to ensure access to services as future incidents occur. Our results suggest that a screening program can produce substantial benefits in terms of identifying people who have been affected and supporting them in accessing treatment. Access to the lists of victims and witnesses maintained by multiple sources that can be consolidated into a single master list would help to maximize the benefit of screening programs in future; however, data protection issues may prove to be a key determinant as to whether this is possible.

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Mental Health Screening After Terrorist Attacks

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