Lessons Learned from Designing a Mental Health Response to the London Bombings

Chris Brewin

Clinical, Educational & Health Psychology, UCL

Traumatic Stress Clinic, Camden & Islington NHS Foundation Trust

Consequences of disaster

Mental health options in the medium-term

The London Bombings programme

Outcomes of programme

Lessons learned

The acute effects of major terrorist attacks on the general population

Short-term distress, anxiety, and behaviour change
Drink/driving offences and traffic fatalities
Identification with country and social groupings
Volunteering for charitable activities
Spending time with close others
BUT NOT
Increased suicide rates
Increased substance abuse

Remote effects of disasters

Outside the affected areas people may report increased PTSD rates to a significant event

Longitudinal health surveys show NO overall increases in rates of psychopathology

There are NO reports of treatment for remote effects

Increased rates of disorder are attributable to individuals with pre-existing psychopathology or who have actual exposure via relatives/friends

General population study	Location	Days since attack	Rate substantial stress %	Rate probable PTSD %
Schuster et al (2001)	New York	4	61.0	
Munoz et al (2005)	Madrid	10	46.7	12.8
Rubin et al (2005)	London	12	31	
Schlenger et al (2002)	New York	46	16.6	11.2
Galea et al (2002)	New York	50		7.5
Miguel-Tobal et al (2006)	Madrid	60		2.3
Stein et al (2004)	New York	67	18	
DeLisi et al (2003)	New York	134		2.3
Galea et al (2003)	New York	145		1.7
Galea et al (2003)	New York	241		0.6

Study with direct victims	Location	Days since attack	Rate probable PTSD%
Miguel-Tobal et al (2005)	Madrid	60	35.9
Shalev & Freedman (2005)	Jerusalem	123	36.8
Elbedour et al (1999)	Hebron	182	39.1
North et al (2005)	Oklahoma City	182	31.3
Jehel et al (2003)	Paris	182	38.5
Grieger et al (2003)	Pentagon	212	14.0
Galea et al. (2003)	New York City	241	14.7
North et al (2005)	Nairobi	274	39.2
Grieger et al (2003)	Pentagon	395	23.0
Verger et al (2004)	Paris	662	31.1
Grieger et al (2003)	Pentagon	795	22.0
Jehel et al (2003)	Paris	973	25.0

Psychological disorders in those directly affected by terrorist attacks

PTSD (rates rarely exceed 30% in those directly affected although they may be higher in children)

Other anxiety disorders such as panic and phobias

Depression

Bereavement reactions and complicated grief

Increases in risky behaviours and substance abuse in the context of other psychopathology

Positive and negative factors affecting rates of disorder

Greater proximity (-)

Greater perceived life threat (-)

Greater rates of injury and death (-)

Greater availability of and repeated exposure to visual evidence (-)

Greater infrastructure damage and resource loss (-)

(but not displacement or relocation by themselves)

Greater previous exposure to similar stressors (+)

Greater perceived support (rather than actual support) (+)

Greater economic resources (+)

Help-seeking after terrorist attacks – studies of direct victims

After Oklahoma City bombing 69% received intervention

After Paris bombing 74% received intervention

But intervention may only have consisted of debriefing or other brief contact – no details of what was offered are available, whether it was evidence-based, how effective it was, or whether any positive effects were enduring

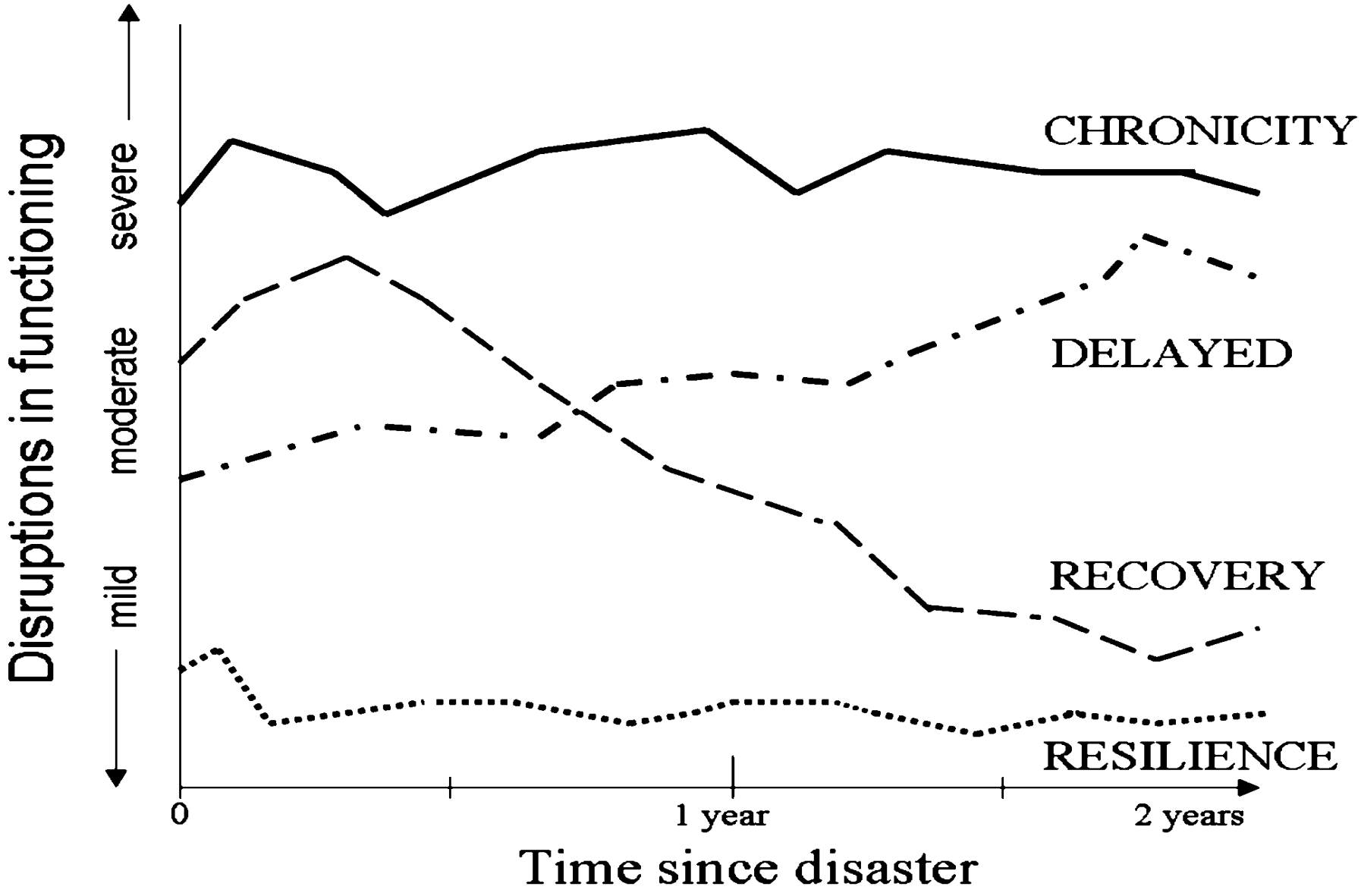
Help-seeking after terrorism – 9/11 studies

In the 2 years after 9/11 there were significant extra treatment costs for related disorders, mainly accounted for by patients who had previously received treatment

Main reason for people with PTSD not seeking help was that they did not believe they had a problem

6-9 months after 9/11 only 1/3 of residents with probable PTSD/depression had sought treatment

Uniformed personnel used disproportionately larger percentages of services after the first year.


Disruptions in functioning
severe
moderate
mild
CHRONICITY
DELAYED
RECOVERY
RESILIENCE
0
1 year
2 years
Time since disaster

Summary: previous experience

Direct victims are at high risk of persistent disorder

PTSD rates of 20% are likely after 2 years

Individuals without previous experience of mental health services avoid treatment

Delayed onset and delayed help-seeking will mean new victims continue to come forward for two years and longer

Little is known about how to deliver mental health interventions, who takes them up, and whether they are effective

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Response to disasters: past assumptions and arrangements in the UK

- Local authorities mount a response aimed at immediate needs, including counselling
- Persistent mental health needs assumed to be met via normal referral channels
- Mental health traditionally not represented in emergency planning or resilience forums, and not integrated with earlier response mechanisms.
- Little coordination between local authorities and mental health providers

Mental health options in the medium-term phase

Global interventions with all exposed persons:

- Psychological debriefing
- Psychological first aid based on immediate needs for safety, medical/nursing care, food and shelter, information. Evidence for promoting: 1) a sense of safety, 2) calming, 3) a sense of self- and community efficacy, 4) connectedness, and 5) hope (Hobfoll et al., 2007)
- Media and web-based information strategy (to include schools if needed)

Mental health options in the medium-term phase

Targeted interventions with persons not making natural recovery:

- general reassurance to individuals and organisations concerning immediate intervention needs
- identification of all affected persons
- estimation of additional treatment needs and available resources in local mental health services
- outreach and screening
- provision of evidence-based trauma treatment under appropriate supervision – may require liaison with specialist traumatic stress centres

Incident considerations

Some affect people living in a defined geographical area who are linked to a known set of health providers (e.g. school shooting)

Some affect a dispersed population who are hard to identify (e.g. train bombing) and have many health providers

Some may affect a population of unknown and changing size (e.g. poison/radioactive material release)

Some may be accompanied by differing degrees of infrastructure damage that will also impact symptoms

Person considerations

A variety of different roles may be involved:

- Direct survivor with or without injuries
- Bereaved relative
- Family member (e.g. child) of survivor
- First responder (trained or untrained)
- Bystander
- Staff dealing with injured or dead (medical, administrative, telephonists, mortuary attendants etc.)
- Journalists/camera operators

The case for a centrally managed outreach and screening programme

Such a programme can:

- identify those with unmet mental health needs
- inform individuals about appropriate thresholds for seeking treatment
- ensure equality of access to treatment regardless of location
- ensure standards of care are maintained
- provide a basis for monitoring the overall success of the mental health response

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Three phases of the psychosocial response to the 7th July 2005 London bombings

Phase 1

Cabinet Office Briefing Rooms and Gold Coordinating Group directed the response of emergency and health services

Phase 2

Westminster City Council set up a Humanitarian Assistance Centre together with the police, Red Cross, and other agencies. This provided advice and practical and emotional support (counselling, alternative therapy) on demand.

Phase 3

CEOs of London NHS mental health trusts belonging to the National Health Service met and assigned responsibility to the Camden & Islington Trust for the mental health response

Clinician-led proposal for programme

Literature suggests high risk of unmet mental health needs and requirement for outreach and screening, plus advantages of targeted rather than global intervention

Existing services will be overburdened by screening alone and will not have the resources for outreach

Dispersed population of those affected will not have equal access to services

A dedicated screening team in a central location can efficiently coordinate outreach and screening, direct cases to treatment centres, monitor outcomes, and ensure equality of access and provision across London

Design of the LB Trauma Response Programme

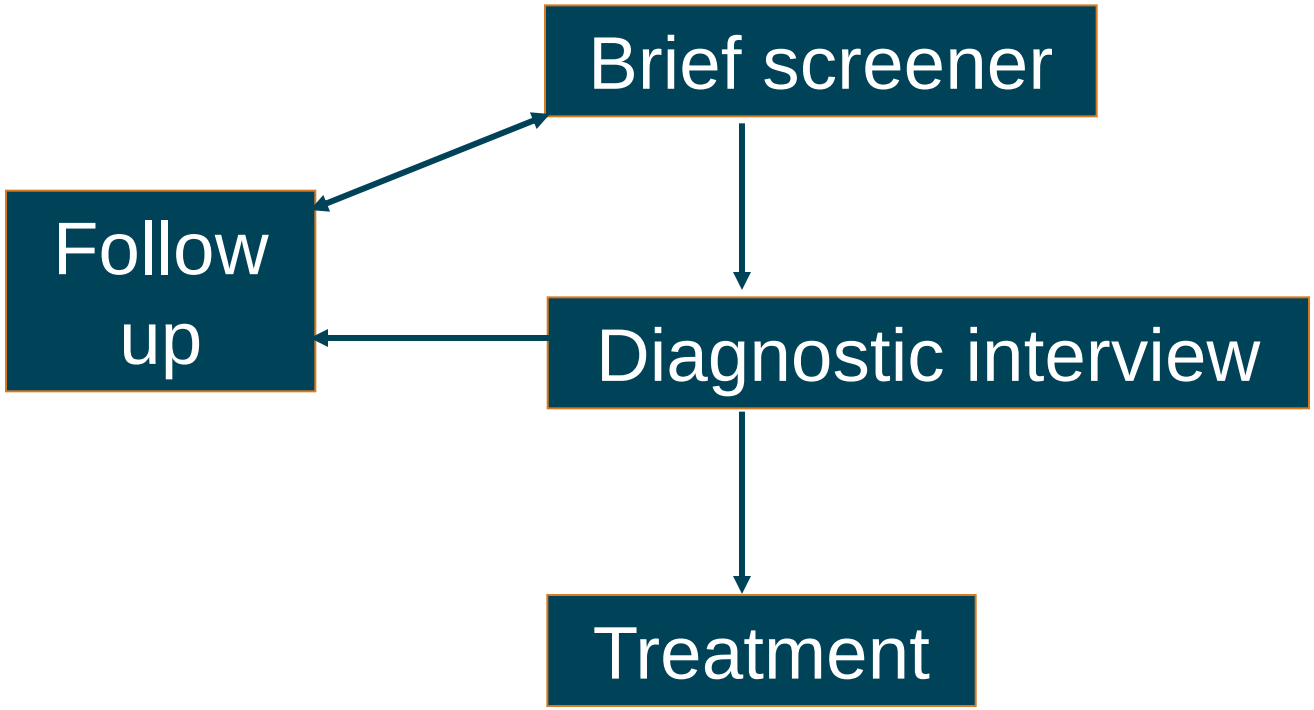
- Partnership between lead mental health trust, specialist traumatic stress centres in London, and London Development Centre for Mental Health (part of National Health Service involved in implementing policy)
- Managed by steering group with representation from NHS clinicians and managers, emergency services, 7th July humanitarian assistance centre, voluntary sector, occupational health, Health Protection Agency
- Reporting to project board that monitored outputs, costs and funding, to Department of Health and to Government ministers

Elements of the LB Trauma Response Programme

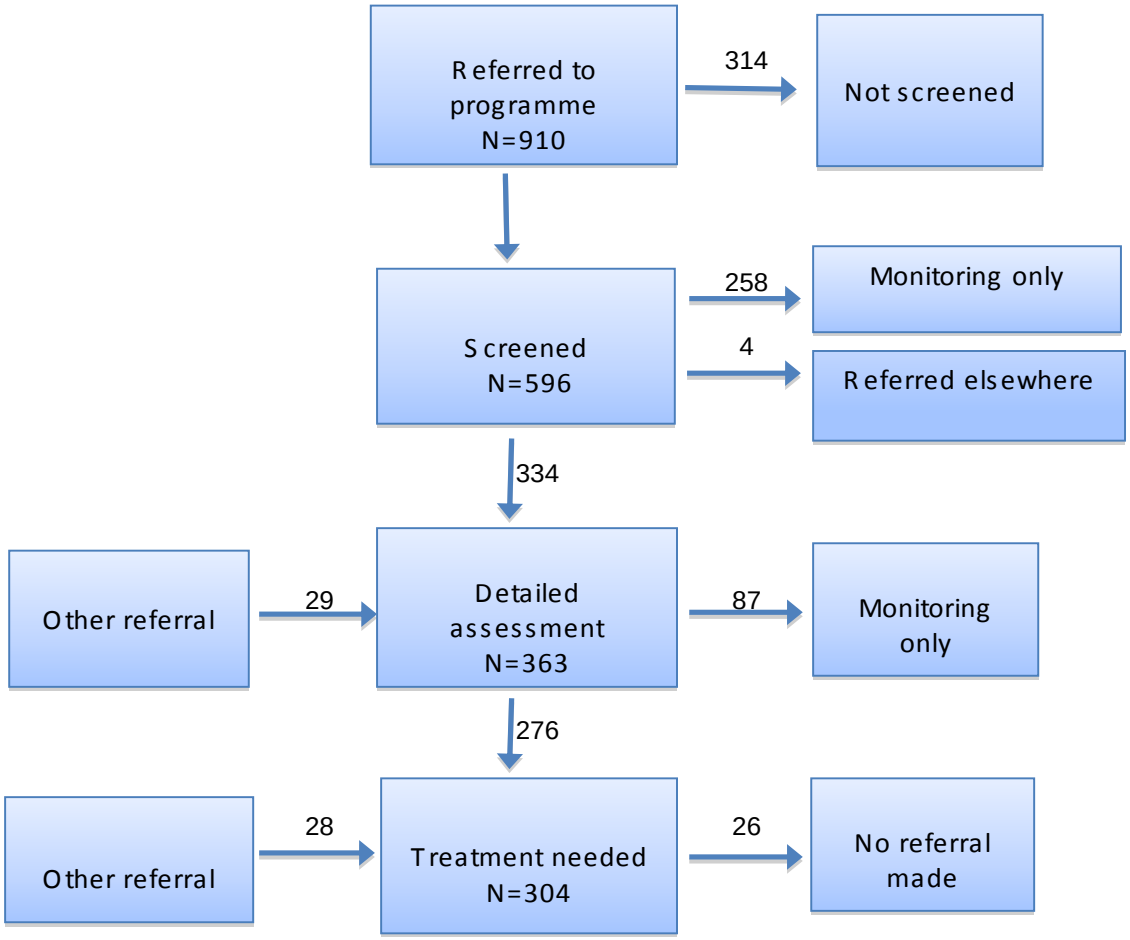
Systematic implementation of a Screen and Treat model:

- Estimated demand 1120 new cases (28% of 4000)
- A centralised screening team of 2 graduate mental health workers, 1 clinical psychologist, 1 administrator
- Additional clinical psychologists based at and supervised by specialist trauma centres and providing officially recommended treatment
- Local treatment protocols but standardised outcome measurement and procedures across centres

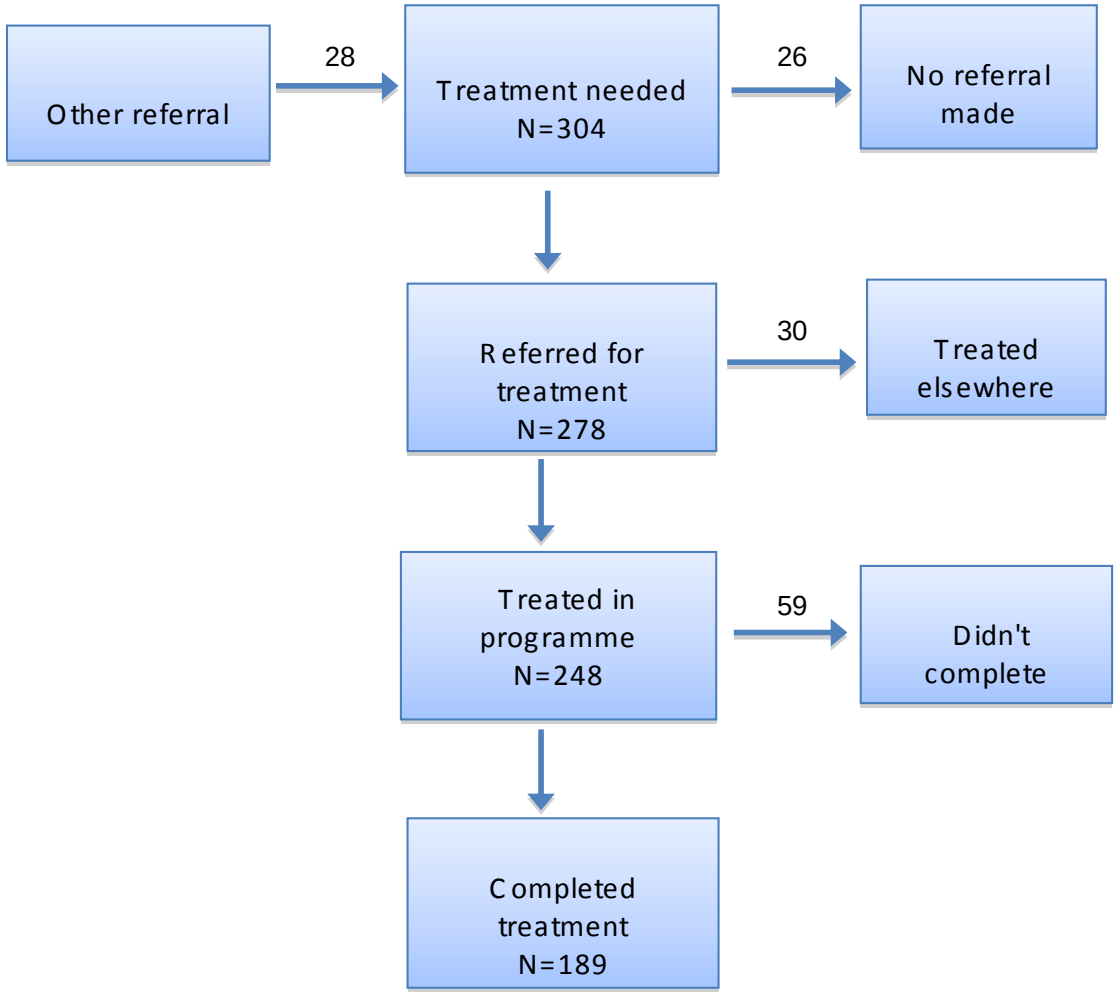
Screen & treat: the process



Screen & treat: the reality I



Screen & treat: the reality II



Screening outcomes

65% (596) of all Programme users were screened

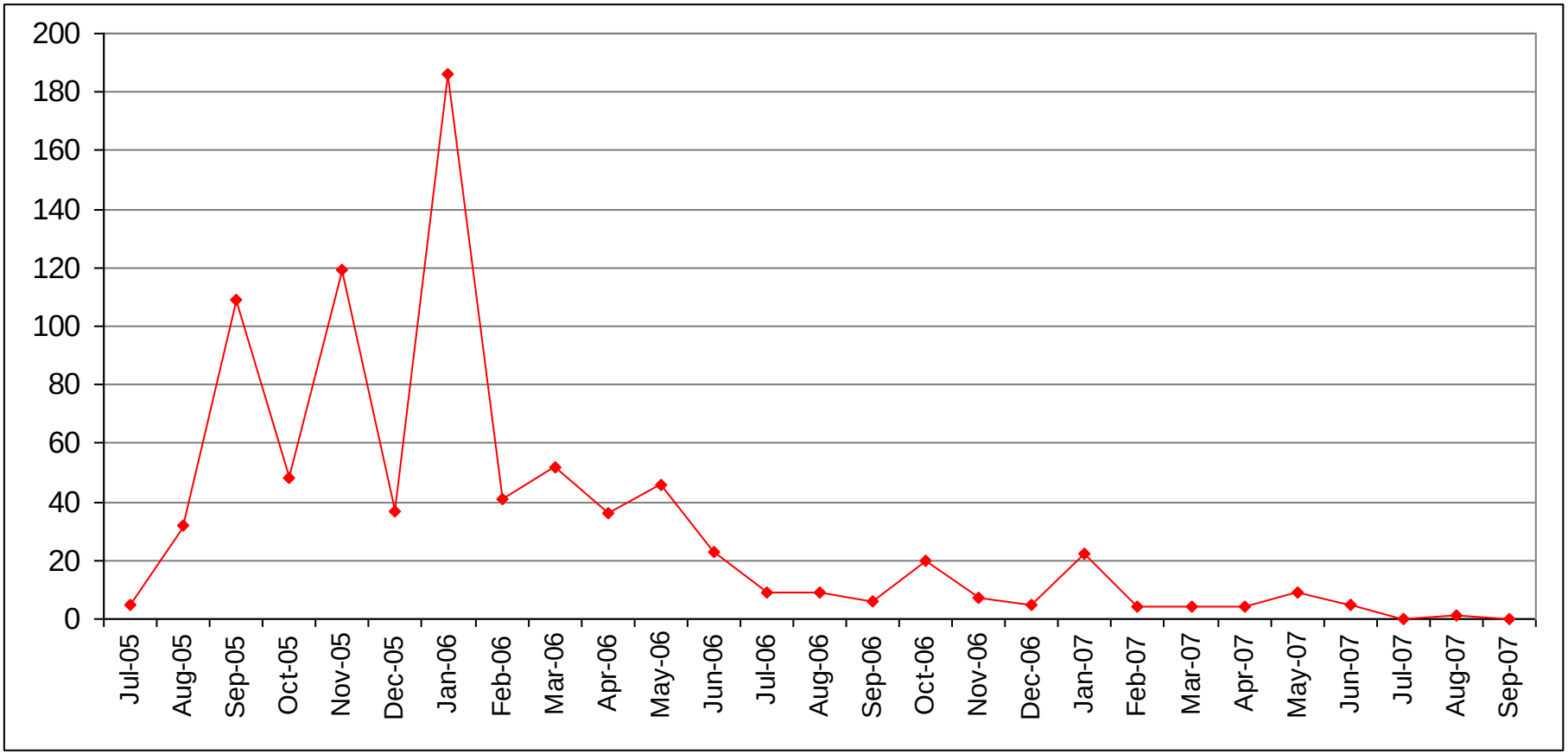
Of those 596, 56% (363) screened positive at some stage and received clinical assessment

Of those 363, 76% (276) were referred for treatment

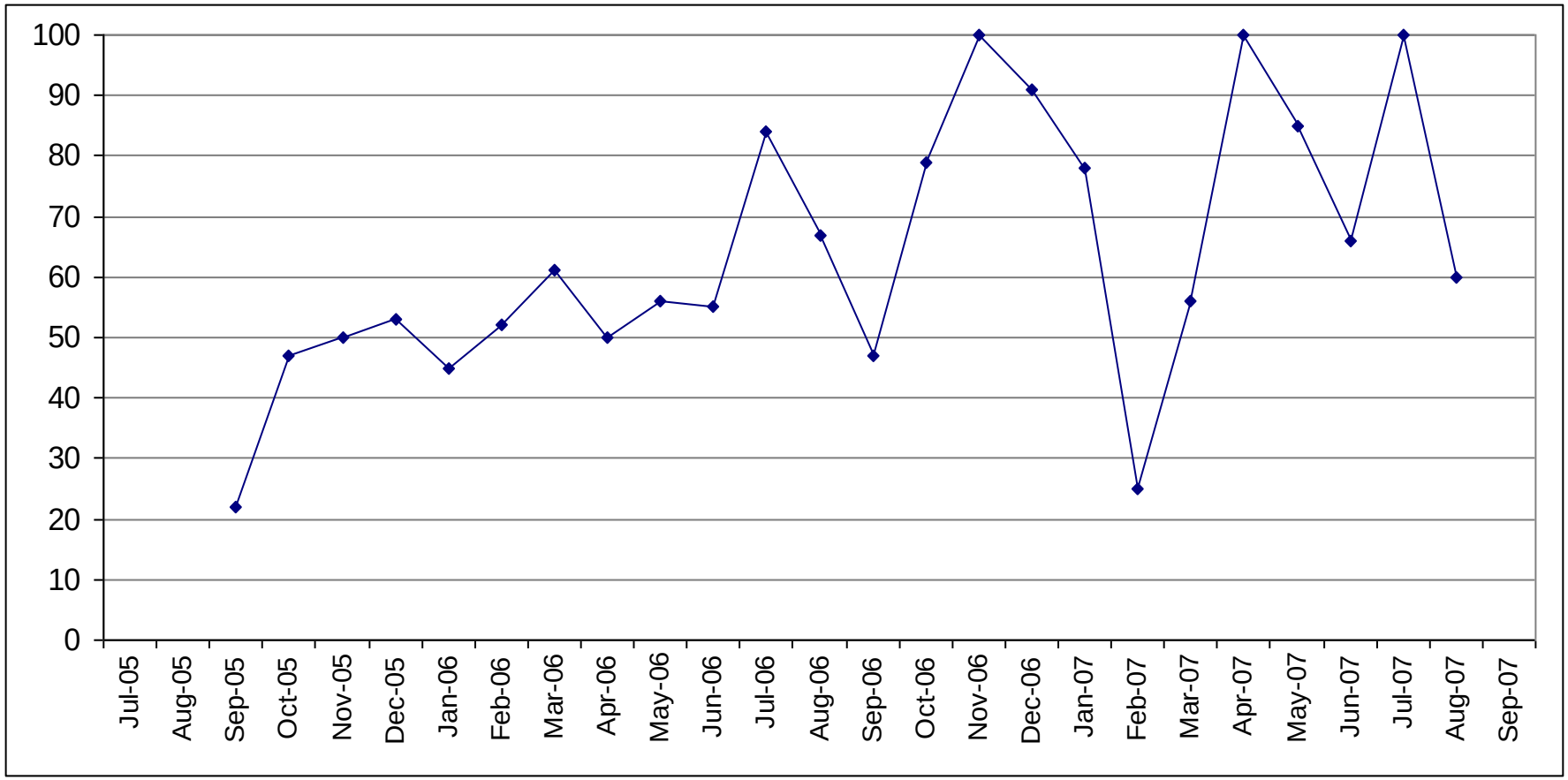
Likelihood of screening positive was highest at first screening, but substantial numbers of participants were positive on second and third screenings

Likelihood of being referred for treatment increased as study went on

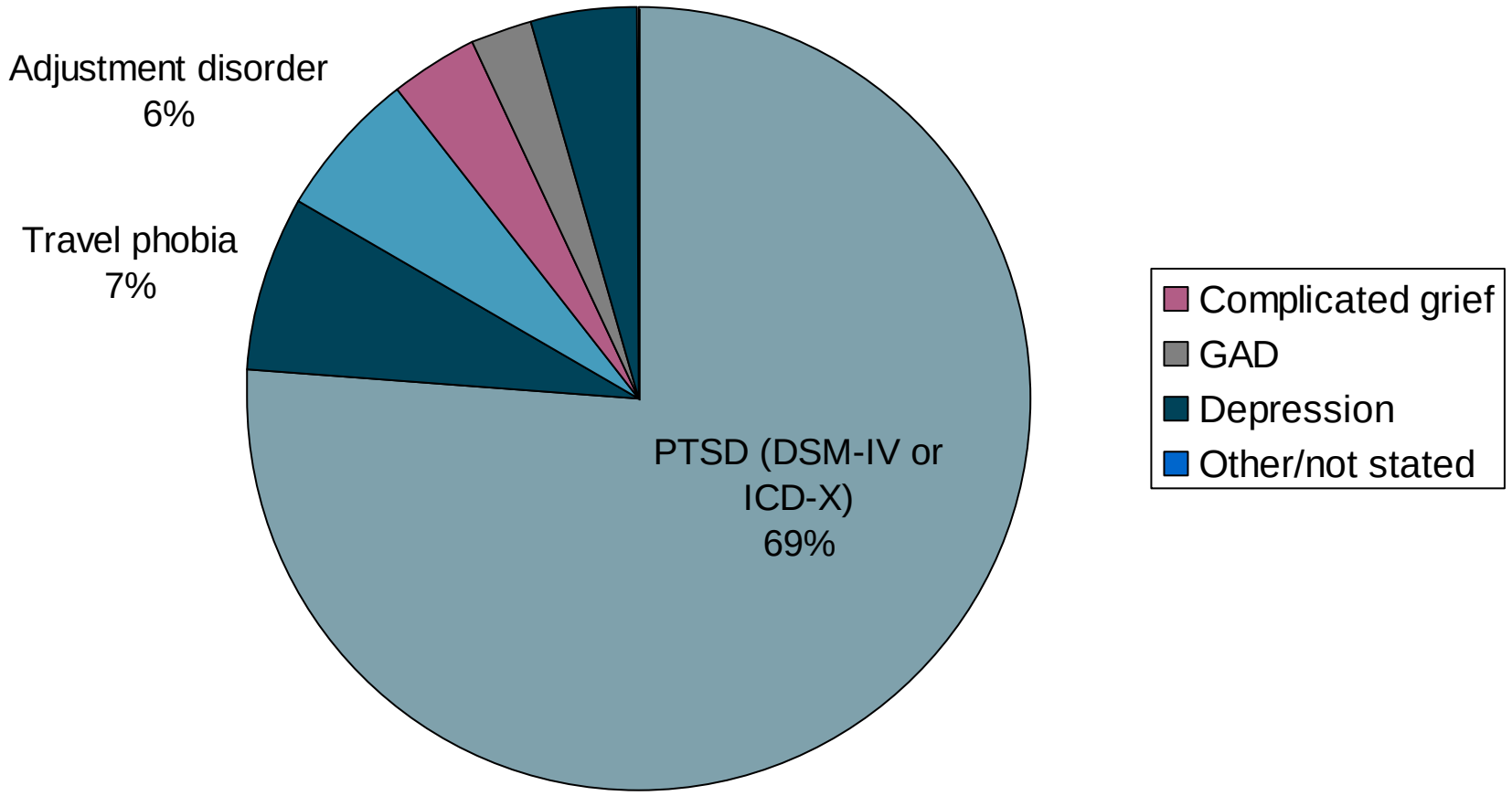
Referrals to Programme



Referrals to treatment (% of assessments)



Primary diagnoses of patients referred to treatment



Treatment activity – PTSD

156 referred to treatment for PTSD (126 for DSM-IV and 30 ICD-10 PTSD)

Of 126 referred to treatment for DSM-IV PTSD:

- 53% female
- 52% white British, 12% white other, 23% other black and minority ethnic groups, 13% not stated
- Mean age 40.51yrs (SD=9.42)
- 83% finished treatment

Treatment activity – DSM-IV PTSD (n = 125)

	No. of sessions	Treatment duration (*weeks*)
Mean	11.96 *(SD = 11.46)*	24.71 *(SD = 22.78)*
Range	0-59	0-96
Median	9	18

Majority of individuals who finished treatment received CBT (61%), EMDR (10%) or both (18%)

Treatment outcome – DSM-IV PTSD

	PDS				BDI			
	Mean start	Mean end	Mean follow-up	Effect size *(d)**	Mean start	Mean end	Mean follow-up	Effect size *(d)**
ITT	34.1	13.6	-	1.87	25.1	12.2	-	1.23
TC	34.4	11.6	15.0	2.11	25.2	10.6	11.2	1.41

**Cohen (1992) – d>0.8 = large effect*

Individuals showing clinically significant change in:

PDS score: 62% (ITT n = 125) and 66% (TC n = 104)

BDI score: 54% (ITT n = 125) and 56% (TC n = 104)

(based on Jacobson & Truax, 1991)

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Lessons learned from users

NHS Trauma Response Programme delivered effective treatment and was found acceptable and appropriate

Programme familiarity and usage low among individuals who had been written to about the Programme by a third party. A substantial minority of these experienced bombings-related psychopathology, and attributed failure to use Programme to lack of knowledge about it

They wouldn’t have minded contact details being passed to National Health Service by other organisations

Family doctors tended to be unhelpful or unaware of services

Lessons learned from clinical providers

Normal referral pathways for mental health care were relatively inflexible and were likely to actively hinder access to care for many survivors

Outreach was possible but greatly hindered by institutional barriers to disclosing who had been affected, particularly through misunderstanding of the Data Protection Act

Setting up the Programme required new contacts with organisations who implement policy and understand commissioning

Necessary contacts with emergency planning networks were not in place

Referral to other areas of the U.K. was difficult

Lessons learned from stakeholders

People affected fall across organisational boundaries in unpredictable ways

Local differences in referral and funding mechanisms and financial arrangements, as well as in trauma care, hinder equality of access and create ongoing problems

Central organisation is desirable for identification of those involved in an emergency, for resolution of institutional barriers, and for coordination of treatment

More clarity needed in who ‘owned’ the project and was responsible for its success, and about how to make financial decisions in the absence of earmarked resources

And finally…general questions for the future

Who is responsible for mounting the immediate response to a terrorist incident, addressing immediate psychosocial needs and providing counselling for those who want it?

Is anyone responsible for identifying all those affected and holding a central register (in the UK this is Public Health England)? Are there data protection issues that will impede their work?

Are plans in place to screen those affected to identify persistent mental health problems and treat them? Are they closely coordinated with other organisations?

Will current care pathways impede some patients' access to treatment post-disaster and what alternative pathways need to be prepared for?

What funding arrangements are in place for unforeseen emergencies?

Resources

Reports

Department of Health (2012). *Arrangements for Health Emergency Preparedness, Resilience and Response From April 2013*.

NHS Commissioning Board (2013). *Emergency Preparedness Framework 2013.*

Websites

Cabinet Office https://www.gov.uk/preparation-and-planning-for-emergencies-responsibilities-of-responder-agencies-and-others

https://www.gov.uk/emergency-response-and-recovery

https://www.gov.uk/local-resilience-forums-contact-details

https://www.gov.uk/government/publications/data-protection-and-sharing-guidance-for-emergency-planners-and-responders

NHS England http://www.england.nhs.uk/ourwork/eprr/gf/

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Hobfoll, SE et al (2007). Five essential elements of immediate and mid-term mass trauma intervention: empirical evidence. *Psychiatry, 70*, 283-315.

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