Psychological First Aid Following The Manchester Arena Bomb

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With thanks to Dr Moshe Farchi, Tel-Hai College Upper Galilee, ISRAEL, for his input with this presentation
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May 22nd 2017

Manchester Evening News
TERROR AT THE ARENA
- AT LEAST 19 KILLED IN BLAST HORROR
- TEENAGERS FLEE IN PANIC FROM GIG
- POLICE TREAT EXPLOSION AS TERRORISM

The Times
Explosion at Manchester concert leaves 19 dead

Daily Mirror
19 DEAD IN POP CONCERT 'SUICIDE BOMB'

The Sun
BLAST ROCKS MANCHESTER ARENA
19 DEAD AT TEEN CONCERT

Metro
Now they kill our little girls

The Times
Libya terror link

Daily Mail
SOLDIERS ON THE STREETS

As suicide bomber who killed 22 in Manchester is revealed to be British-born jihadi, PM orders...
Local reaction in Manchester

- Shock
- Terror
- Disbelief
- Anger
Circles of Trauma (Mann 2018)

Other Mancunians

- Those injured/families/friends
- Witnesses
- Those at the arena
- Those who knew someone at the arena injured
- Those with connection to the arena
Psychological First Aid: the process

- Pop up centre set up in city centre
- Training of over 100 volunteers in Zone 1 Cognitive First Aid
- Trauma Experts from Israel flown in (courtesy of Easyjet).

Professor Yoni Gidron
Psychological first aid: The protocols

- Zone 1
- Zone 2
Based on knowledge of the stress response

Let’s look at those in the closest circles of trauma

- Those injured/families/friends
- Witnesses
- Those at the arena
- Those who knew someone at the arena injured
- Those with connection to the arena
Evaluation of stressful events

1. Is it dangerous?
   - NO → Coping
   - YES → 2.

2. Can I control the situation?
   - YES → Coping
   - NO → 3.

3. Can I control my inner reactions?
   - YES → Coping
   - NO → STRESS

Use of coping resources
Acute stress reaction (ASR)

- Helplessness
- Threatened
- Fear
Immediate simple and correct mental health first response, given on-site or within up to four weeks of the event, CAN HELP:

✓ Wide scale reduction of the ASR symptoms.

✓ Empower the individual’s self efficacy and sense of coherence and control.

✓ In case of mass disaster, initial intervention clears the disaster zone from panicked /traumatized people and enables the search & rescue units to focus on saving lives.

✓ Possible reduction of the risk PTSD

✓ Enable fast and adaptive return to routine function.
Trauma Stages

ASR (90%)

ASD (20%)

PTSD (5%)
Who develops ASD/PTSD?

- Resilience
- Sense of coherence
- Hardiness
- Self-efficacy
- Neuropsychology
- Psychiatric history
- Perception of event
Zone 1 intervention: 6 Cs Model

- Goal of Zone 1 intervention (asap):
  - To shift the victim from a sense of helplessness to a sense of active coping survival
What happens during traumatic incident?

- Hyperactivity of the amygdala and limbic system
- Underactivity of the cortex
The 6 C's Model
Emergency Mental Health Interventions Principles
Farchi, 2012

Communication
Continuity
Cognitive
Commitment
Control
Challenge
Who can be trained in Zone 1 protocol?

- First responders
- Mental health professionals
- Employees
- Teachers
- Students
- Anyone?
Traditional post-trauma interventions

- Debrief
- Normalising reactions
- Support
- Tea and sympathy
- Allowing expression of thoughts and feelings
Patient describes the event. Each time he/she says a feeling or a somatic sensation, therapist asks to elaborate verbally and give a reason.

Therapist repeats the story, chronologically organized, with causal links between the event’s segments, using verbal labels of emotions/sensations

Patient repeats the story the way the therapist did
Vagal Breathing

- Vagal nerve = measure of adaptability
- People with High VN recover faster in BP, cortisol and inflammation
- Activating vagal response is thus vital
In 1921, a German physiologist named Otto Loewi discovered that stimulating the vagus nerve caused a reduction in heart rate by triggering the release of a substance he coined Vagusstoff (German: “Vagus Substance”). The “vagus substance” was later identified as acetylcholine and became the first neurotransmitter identified by scientists.
what is that vagus nerve?

- The vagus nerve is the most important element of the parasympathetic nervous system (the one that calms you down by controlling your relaxation response).

- It originates from the brainstem and it is “wandering” all the way down, into the belly, spreading fibres to the tongue, pharynx, vocal chords, lungs, heart, stomach, intestines and glands that produce anti-stress enzymes and hormones (like Acetylcholine, Prolactin, Vasopressin, Oxytocin), influencing digestion, metabolism and of course the relaxation response.

- Vagus nerve acts as the mind-body connection, and it is the cabling behind your heart’s emotions and gut instincts. The key to manage your mind state and your anxiety levels lies on being able to activate the calming nervous pathways of your parasympathetic system.
The evidence

Effects of MSI + VB vs. Stress management
vs control on ASR
(Farchi et al. Submitted)

Physical trauma in ER
At Naharia

Baseline Anxiety, pain, HR

MSI + Vagal Breathing

Stress Management

Supportive Control

Anxiety, pain, HR after 1-2 hours in ER
Effects of MSI + VB vs. Stress management vs control on ASR

(Farchi et al. In preparation)
Effects of MSI + VB vs. Stress management vs control on ASR
(Farchi et al. In preparation)

![Bar chart showing comparisons between Control, MSI + VB, and SM conditions before and after intervention.](chart.png)
Effects of MSI + VB vs. Stress management vs control on ASR

(Farchi et al. In preparation)
Putting it into Practice in Manchester
Photos courtesy of HeadsUp CIO
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References

