

PILL TESTING AT MUSIC EVENTS

**An evidence-based harm minimisation intervention
which should be adopted in Australia**

Dr Russ Scott
Forensic Psychiatrist
Honorary Secretary
ANZAPPL Queensland Branch

NSW Coroner's Court

Inquest into the deaths of six young persons at outdoor music festivals

Is on-site pill testing at music festivals an evidence-based harm minimization intervention ?

Should on-site pill testing be adopted in Australia and funded by government ?



On-site pill testing at music festivals

attendees anonymously submit scraped samples of pills/contents of capsules
persons attending the pill testing
won't be targeted by police



What do the pills contain ?

MDMA - various analogues, different ratios

adulterated with stimulants

- caffeine, ephedrine, cocaine

adulterated with hallucinogens

- LSD, psilocybin, ketamine

contaminants

- atropine, lactulose

bulking agents

- chlorine, fertilizer, detergent



Pill testing – a qualitative analysis

cannot establish

- drug concentrations
- ratios of various active isomers



Analytic method

relies on comparing pill samples with **reference library of known substances**

- contaminants, excipients
- stabilizers, diluents, fillers, glidants
- colouring, bulking agents

New psychoactive agents

Dutch Drugs Information and Monitoring System

22 in 2007

431 in 2013

any novel constituent not in the reference library will not be identified

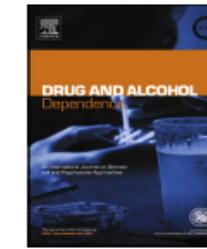
Drug and Alcohol Dependence 147 (2015) 109–115



Contents lists available at [ScienceDirect](#)

Drug and Alcohol Dependence

journal homepage: www.elsevier.com/locate/drugalcdep



Monitoring new psychoactive substances (NPS) in The Netherlands:
Data from the drug market and the Poisons Information Centre

Laura Hondebrink^{a,*},¹ Johanna J. Nugteren-van Lonkhuyzen^{a,1}, Daan Van Der Gouwe^b,
Tibor M. Brunt^{b,c}



Results of on-site testing

- confirms the pill/capsule contains as “sold/acquired”
 - MDMA ‘Ecstasy’
- something different
 - a substance identified from the testing assay library
 - a substance which cannot be identified
- “inconclusive result”
 - “impure mixture” of multiple compounds
 - did not meet cut-off threshold

Individualised advice, counselling

- encouraged to not take the pill/capsule
 - whatever the result



Different forms of pill testing in Europe and Canada

on-site 'front of house'

'back of house'

on-line



UNSW
SYDNEY

NDARC
National Drug & Alcohol Research Centre

Global review of drug checking services in 2017

Review of pill testing in 20 countries

23 of 31 services conducted on-site testing at festivals, nightclubs

no studies demonstrating any effect (positive or negative)

- substance use, hospital or ambulance attendances, mortality
- directly attributable to on-site pill testing

Drug safety testing, disposals and dealing in an English field: Exploring the operational and behavioural outcomes of the UK's first onsite 'drug checking' service

Fiona Catherine Measham

Research Paper

Evaluation of a drug checking service at a large scale electronic music festival in Portugal

Helena Valente^{a,b,c,*}, Daniel Martins^{b,d}, Helena Carvalho^{e,f}, Cristiana Vale Pires^{b,g,h},
Maria Carmo Carvalho^{b,h}, Marta Pinto^{a,c,i}, Monica J. Barratt^{j,k}

Secret Garden Party, Cambridgeshire UK – July 2015

no pill-testing

59 attended nearby hospital Emergency Department

19 attendances drug-related

2 required psychiatric assessment

9 required admission to hospital

no breakdown of admission diagnoses



Secret Garden Party, Cambridgeshire UK – July 2016

on-site pill-testing

50 attended nearby hospital E D
one required admission to hospital
no figures on drug-related attendances

NGO Chiron Welfare

supported 90 persons aged > 18
supported 35 persons aged < 18
affected by alcohol and/or substances

NGO Kosmicare UK

38 self-presented
mostly substance-related problems



Secret Garden Party, Cambridgeshire – July 2016

230 pill samples analysed

164 pills (71%) matched what was “sold/acquired”

45 pills (19.6%) did not match what was “sold/acquired”

four day festival attracted 25,000 attendees

230 (<1% of total attendees) availed of pill testing, brief intervention

“intentions” surveyed

n =121 (52%) said they intended to use the drugs as originally planned

n = 49 (21%) handed over their substances for destruction

Secret Garden Party, Cambridgeshire – July 2016

significant limitations of the pilot study

polysubstance use is the norm at music festivals

any attendee intoxicated/unable to meaningfully engage, turned away

of those assessed as capable of engaging in 'brief intervention'

- 63% already consumed alcohol
- 43% already consumed substances other than alcohol



Boom Festival Portugal – August 2016 on-site pill testing

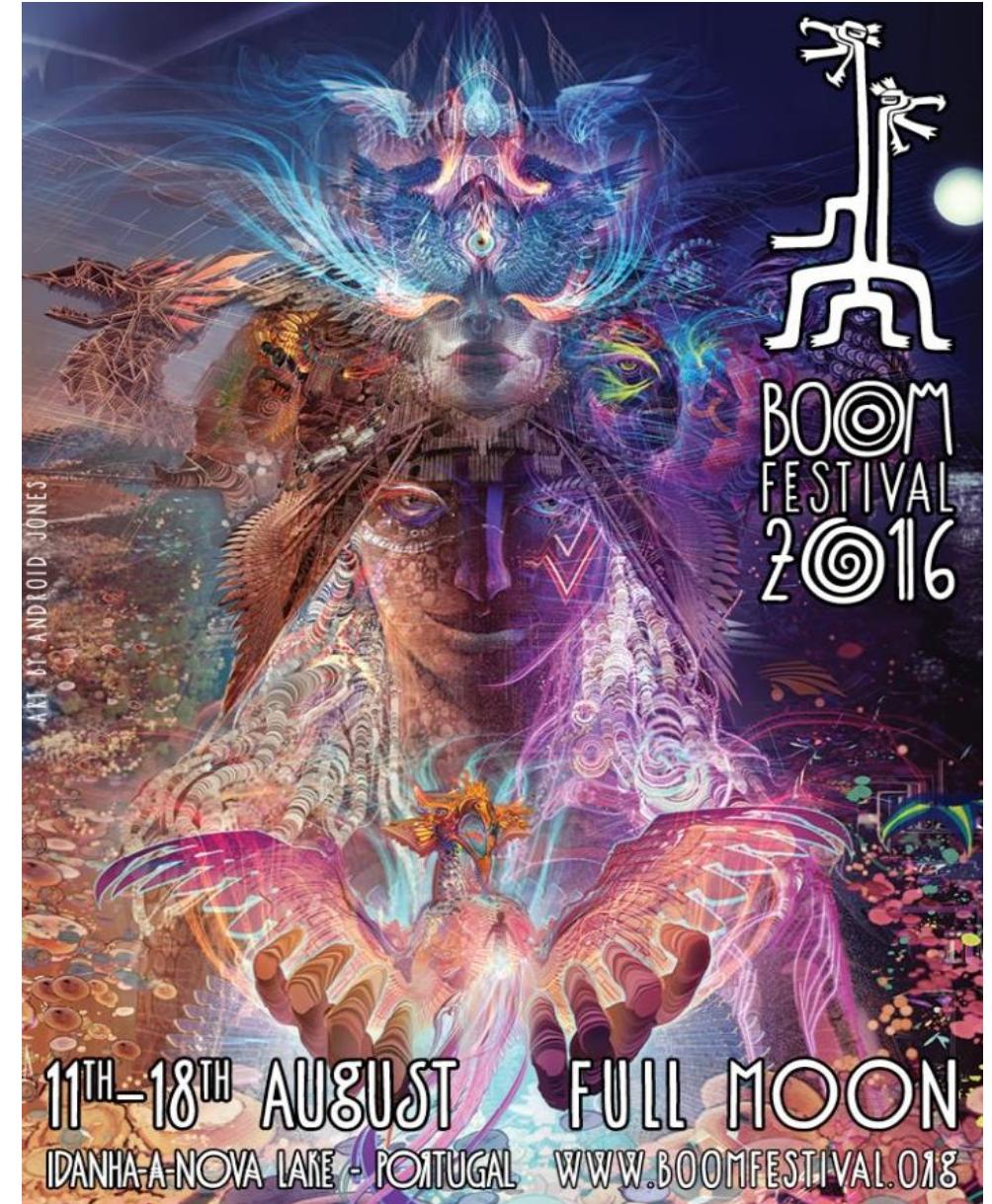
40,000 attendees

753 drug samples submitted for analysis

497 (1% of all attendees) had ‘brief intervention’ participated in survey of their “intentions”

well educated, socially integrated, aged in 20s

most (n = 309) wanted to confirm pills were MDMA
-> 90% of pills actually contained only MDMA



Boom Festival Portugal – August 2016

after pills tested, brief intervention, 'intentions' of 497 respondents surveyed

for test result "only the expected substance (n=370)" -> 98% would take their pill

for test result "expected substance plus adulterants (n=41)" -> 68% would still take the pill

reasoning of respondents who intended to take pill after testing

61% – "Its only the expected substance"

32% – "It's a substance I am familiar with"

5% – "its new and I want to try it"

5% – "its adulterated but non-toxic"



Boom Festival Portugal – August 2016

limitations of naturalistic study

only considered pill user's self-reported "intention"
not their actual behaviour

recall and social desirability bias

no provision to hand over pills, capsules
no observation of discarded pills in amnesty bins



Report on the ACT GTM Pill Testing Pilot: a Harm Reduction Service

Prepared by the Safety Testing Advisory Service
At Festivals and Events (STA-SAFE) Consortium

June, 2018

The STA-SAFE consortium consists of:

Harm Reduction Australia
Australian Drug Observatory, Australian National University
Noffs Foundation
DanceWize, Harm Reduction Victoria
Students for Sensible Drug Policy Australia



Groov'n the Moo (GTM) festival ACT – April 2018

Dr David Caldicott
Emergency Department consultant

“... the pill testing trial was very successful”

“Consistently, a large proportion of people changing their behaviour when they are provided with advice about what is in their pill”

“... 42% who used the pill testing service reported that their drug consumption would change as a result of the testing.”



Groov'n the Moo (GTM) festival ACT – April 2018 only 83 pills tested

in 38 (46%) pills, chemicals identified as the dominant compound
did not met the cut-off threshold for the infrared spectroscopy

“impure mixture” of multiple compounds

or

**the dominant compound
not recognised from the reference library**



Groov'n the Moo (GTM) festival ACT – April 2018

85 presentations to first aid provider including 20 to ACT ambulance

unknown number presented to Headspace, Red Frogs youth support programme

no direct comparison with numbers from same festival in 2017

ACT Ambulance Service general manager reported to ACT Chief Health Officer:

“no evidence of decreased presentations to site health services, nor any noticeable change in crowd behaviour.”

The Canberra Times (1 July 2018)



Groov'n the Moo (GTM) festival ACT – April 2018

24,000 attendees

results of pill tests, counselling provided to only 75 (0.3% of total attendees)

reported intentions:

58% intended to use the drugs as originally planned

12% would use **less drug**

5% not use the tested drug **but would use another drug**

7% undecided

18% said they would not use any illicit drugs

7% observed to discard pills in amnesty bin ->



Shambhala dance music festival British Columbia – August 2018

up to 18,000 attendees

2387 pill samples tested

attendee provided with advice and counselling

65 pills (3% of the total samples) were discarded in on-site amnesty bins

Canadian Journal of Public Health (2018) 109:740–744

<https://doi.org/10.17269/s41997-018-0126-6>

INNOVATIONS IN POLICY AND PRACTICE



Drug checking at an electronic dance music festival during the public health overdose emergency in British Columbia

Silvina C. Mema ^{1,2} • Chloe Sage ³ • Yuhui Xu ¹ • Kenneth W. Tupper ^{2,4} • Daniel Ziemianowicz ³ • Karen McCrae ⁴ • Mark Leigh ³ • Matthew Brendan Munn ⁵ • Deanne Taylor ^{1,6} • Trevor Corneil ^{1,2}

On-site pill testing at music festivals no statistical effect on measurable outcomes

Can pill testing have more subtle effects which reduce harms at music festivals ?

Can pill testing contribute to normalisation of substance use at music festivals ?



AUSTRALIAN DRUG TRENDS 2018: KEY FINDINGS FROM THE NATIONAL ECSTASY AND RELATED DRUGS REPORTING SYSTEM (EDRS) INTERVIEWS

Amy Peacock^{1,2}, Daisy Gibbs¹, Antonia Karlsson¹, Julia Uporova¹, Rachel Sutherland¹, Raimondo Bruno^{1,2}, Paul Dietze^{3,4}, Simon Lenton⁵, Rosa Alati⁶, Louisa Degenhardt¹, & Michael Farrell¹

¹ National Drug and Alcohol Research Centre, University of New South Wales

² School of Medicine (Psychology), University of Tasmania

³ Burnet Institute

⁴ Department of Epidemiology and Preventive Medicine, Monash University

⁵ National Drug Research Institute, Curtin University

⁶ Institute for Social Science Research, University of Queensland

Young Australians amongst highest per capita users of 'recreational' or 'party' drugs

Ecstasy and Related Drugs Reporting System 2018
predominantly well-educated
aged 18 – 30

cannabis, MDMA – drugs of choice

27% weekly or more frequent use of MDMA



The 2016 EDRS key findings: A survey of people who regularly use psychostimulant drugs.

Authors: Jennifer Stafford, Rachel Sutherland, Lucinda Burns and Courtney Breen
National Drug and Alcohol Research Centre, UNSW Australia

795 regular psychostimulant users

44 % tertiary educated

25 % full time, 24 % part-time employed

25 % used MDMA “weekly or more often”

93 % reported MDMA was “easy” to “very easy” to obtain

RESEARCH

Open Access



Music festival attendees' illicit drug use, knowledge and practices regarding drug content and purity: a cross-sectional survey

Niamh Day^{2,4†}, Joshua Criss^{2,4†}, Benjamin Griffiths^{2,4†}, Shireen Kaur Gujral^{2,4†}, Franklin John-Leader¹, Jennifer Johnston^{3,4} and Sabrina Pit^{2,3,4*} 

2016 Australian music festival

642 surveyed

aged between 18 and 30

60 % used MDMA in past 12 months

2/3 agreed drug suppliers may use on-site pill testing as “quality control”

Recreational substance users who attend music festivals
educated, socially integrated, economically endowed young people
who have few, if any, substance-related problems

survey of 372 regular users of MDMA in Australia

45% in employment

25% in full time study

generally well informed about harms associated with substances



Addictive Behaviors 31 (2006) 137–142

**ADDICTIVE
BEHAVIORS**

Risk and benefit perceptions of party drug use

Bethany White^{a,*}, Louisa Degenhardt^a, Courtney Breen^a, Raimondo Bruno

Drug Information and Monitoring System – back-of-house pill testing

recreational drug users relatively well-informed about risks of pill taking

advice reached only a ‘fraction’ of all (potential) drug users

Review

Drug Testing
and Analysis

Received: 12 September 2010

Revised: 18 November 2010

Accepted: 23 May 2011

Published online in Wiley Online Library: 6 September 2011

(www.drugtestinganalysis.com) DOI 10.1002/dta.323

The Drug Information and Monitoring System (DIMS) in the Netherlands: Implementation, results, and international comparison

Tibor M. Brunt* and Raymond J.M. Niesink

European Monitoring Centre For Drugs and Addiction – 2017

practical limitations of pill testing at music festivals
noisy, crowded atmosphere

mitigated against efficacy of the attempted intervention
attendees may already be affected by substances when they present



European Monitoring Centre
for Drugs and Drug Addiction

Drug checking as a harm reduction tool for recreational drug users: opportunities and challenges

Background paper commissioned by the EMCDDA for
Health and social responses to drug problems: a European guide

Assumptions – “front of house” pill testing at music festivals

young person, may be under the influence of alcohol/other drug/s takes out a pill, pauses:

- asks ‘should I get this pill tested?’
- seeks out a pill testing site, wait in line
- waits up to 15 minutes for the result of the pill testing
- **rationally considers the result of the pill testing**
 - ‘we have no idea’
 - ‘we can’t be certain what’s in this pill’
- **considers the advice not to take the pill, regardless of the result**
- desists from taking the pill, because:
 - for the first time, informed of risks of substance use by someone they trust

Pill testing – illusion of safety, leads to more, not less, use

719 US college students
anonymous written survey by DanceSafe volunteers

20% of non-users said they 'might try a pill' acquired as MDMA

if DanceSafe was present to test the pills

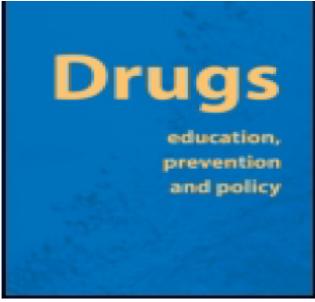


Journal of Health & Social Policy

ISSN: 0897-7186 (Print) (Online) Journal homepage: <https://www.tandfonline.com/loi/wzhs20>

DanceSafe and Ecstasy

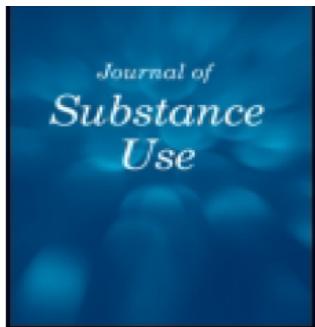
Normalisation of substance use at music festivals



Drugs: Education, Prevention and Policy

ISSN: 0968-7637 (Print) 1465-3370 (Online) Journal homepage: <https://www.tandfonline.com/loi/idep20>

The normalisation of drug supply: The social supply of drugs as the “other side” of the history of normalisation



Journal of Substance Use

ISSN: 1465-9891 (Print) 1475-9942 (Online) Journal homepage: <https://www.tandfonline.com/loi/ijsu20>

Living in ecstasy: applying the normalization thesis to ecstasy use in Canada

Victorian parliament - Inquiry into drug law reform – March 2018

rejected proposal for drug testing

key concern: **“drug checking may lead to a perception that once tested, the substances are ‘safe’ to consume”**



PARLIAMENT OF VICTORIA
Law Reform, Road and Community Safety
Committee

Inquiry into drug law reform

Has pill testing been shown to increase substance use ?



2018 Victorian parliamentary inquiry into drug law reform

Prof Alison Ritter “internationally recognised drug policy scholar”
Director, Drug Policy Modelling Program, University of NSW

“international evidence” has shown that pill testing has
not been associated with an increase in drug use



UNSW
SYDNEY

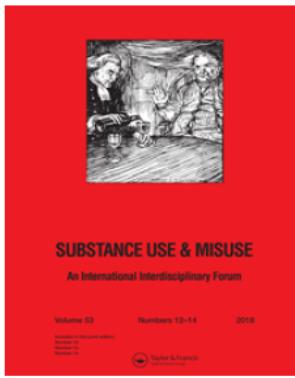
NDARC

National Drug &
Alcohol Research Centre

Netherlands 'recreational drug'

highly educated young people

'good' or 'very good' educational opportunities



Substance Use & Misuse

ISSN: 1082-6084 (Print) 1532-2491 (Online) Journal homepage: <https://www.tandfonline.com/loi/isum20>

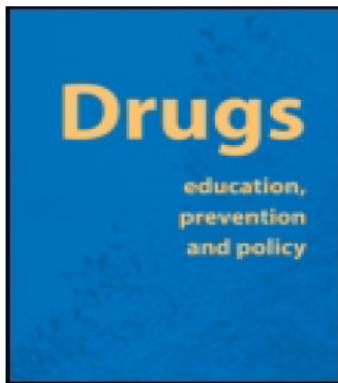
Prevalence and Psychosocial Correlates of Party-
Drug Use and Associated Problems among
University Students in the Netherlands

Laura E. Kunst & Winifred A. Gebhardt

Netherlands – normalisation of ‘recreational drugs’

pill testing

processes of public warnings about dangers of novel psychoactive agents



Drugs: Education, Prevention and Policy

ISSN: 0968-7637 (Print) 1465-3370 (Online) Journal homepage: <https://www.tandfonline.com/loi/idep20>

Acceptance of illicit drug use in the Netherlands and Norway: A cross-national survey

R. van der Sar, E. Ødegård, J. Rise, E. P. M. Brouwers, L. A. M. van de Goor & H. F. L. Garretsen

Netherlands – normalisation of ‘recreational drugs’



highest national estimates of the number of persons aged between 15 – 34 who had used MDMA in the previous year

multi-city waste water analysis

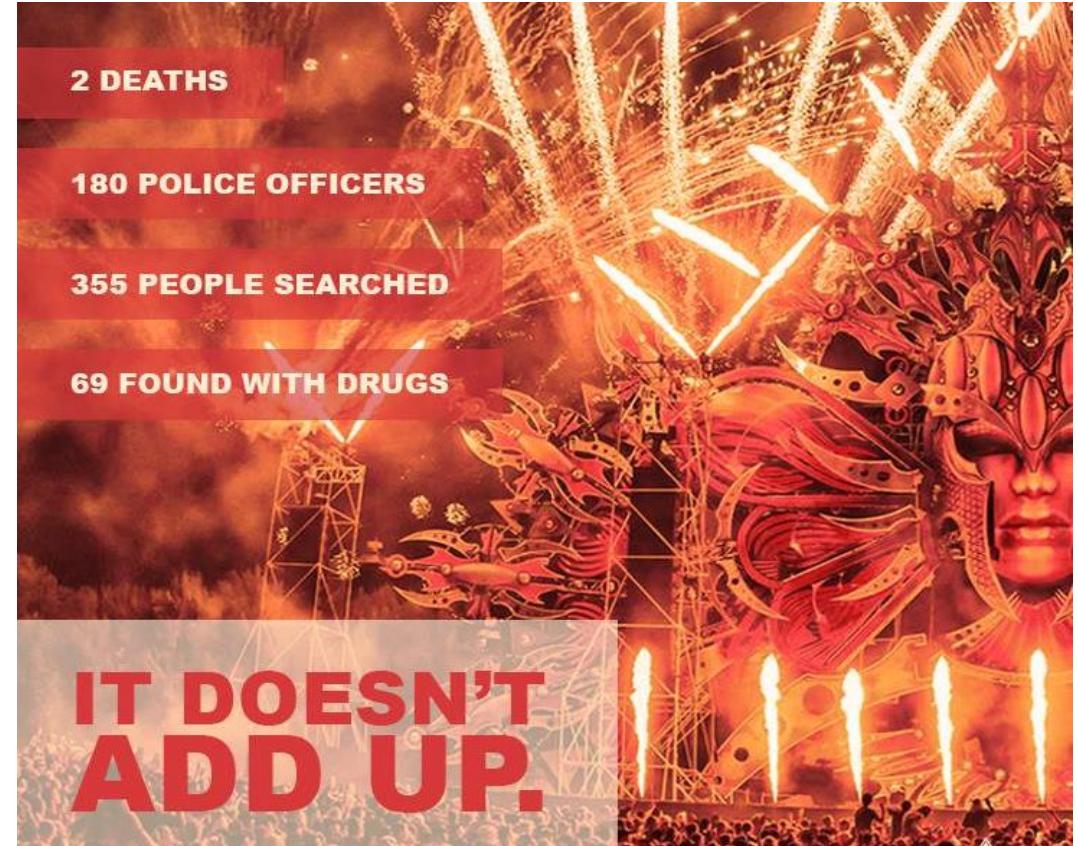
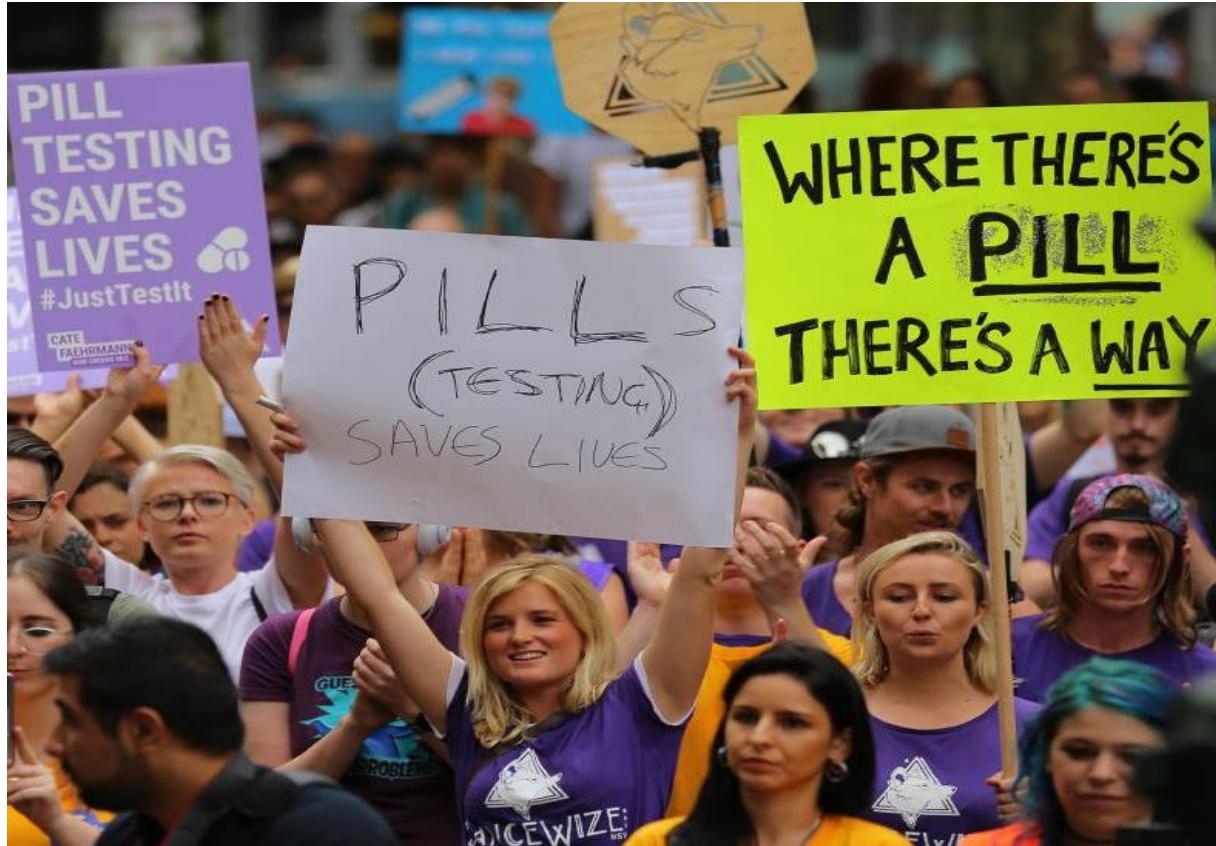
Netherlands one of the highest mass loads of MDMA in the European Union

reported drug-related deaths

in 2016, largest rise

up by 91% compared with 2014

“Pill testing saves lives – just test it !”



**IT DOESN'T
ADD UP.**

Context, environment of music festivals

body temperature dysregulation

physical exertion, perspiration

-> dehydration, hyperthermia, seizures

concomitant caffeinated drinks, alcohol, other substances



Internal Medicine Journal (2016)

EDITORIAL

Pill testing at music festivals: can we do more harm?

J. Schneider,¹ P. Galettis,² M. Williams,² C. Lucas² and
J. H. Martin²

Schools of ¹Biomedical Sciences and Pharmacy, and ²Medicine and
Public Health, University of Newcastle, Newcastle,
New South Wales, Australia