

Institution: University of Stirling		
Unit of Assessment: 3. Allied Health Professions, Dentistry, Nursing and Pharmacy		
Title of case study: Increasing awareness and intervention strategies to tackle depression, suicide and other psychiatric emergencies		
Period when the underpinning research was undertaken: 2008-2019		
Details of staff conducting the underpinning research from the submitting unit:		
Name(s):	Role(s) (e.g. job title):	Period(s) employed by submitting HEI:
Margaret Maxwell	Professor	2007-present
Fiona Harris	Associate Professor	2006-present
Edward Duncan	Associate Professor	2004-present
Cath Best	Statistician	2004-2007, 2008-2009, 2014-present
Josie Evans	Reader	2009-present
David Fitzpatrick	Senior Lecturer	2005-September 2020
Period when the claimed impact occurred: September 2014-present		
Is this case study continued from a case study submitted in 2014? No		
1. Summary of the impact		
University of Stirling research has improved societal responses to depression and suicide by:		
Impact 1. delivering free evidence-based resources to guide the practices of healthcare and community-based professionals, and on-line therapy for millions of people experiencing depression, especially for those in lower-income countries (ifightdepression.com),		
Impact 2. supporting the development of new responses and care pathways for psychiatric emergencies across Scotland through an NHS 24 111 service, benefitting many thousands annually,		
Impact 3. helping to respond to the mental health crisis and distress through the development of a brief intervention for distress, which has benefited tens of thousands of individuals across Scotland.		
2. Underpinning research		
Context		
Globally, approximately 1,000,000 people per year take their own life, with depression being the most prominent risk factor. People who die by suicide often contact healthcare services in the year preceding their death. Training programmes for improving the capacity of healthcare professionals and those working in community settings to detect, signpost to services, or treat depression and manage suicide risk, are one of the evidence-based strategies in the field of suicide prevention. However, a lack of capacity for referral or signposting to services or other forms of help for individuals, especially in lower income countries, makes the need for other (free) treatment or self-help options imperative.		
The European Alliance Against Depression (EAAD) was established as a charitable organisation in 2008 with the University of Stirling (hereafter, Stirling) as a founding partner (http://www.eaad.net). Maxwell was the UK lead on developing resources for multi-level awareness raising activities, known as the '4-level approach', to raise awareness of depression and suicide among (1) the public, (2) healthcare professionals including GPs, (3) community based professionals including police and (4) those at risk of suicide and their families (G1, G2, R1). The 4-level approach was implemented and evaluated in the EU funded Optimised Suicide Prevention and Implementation study (OSPI), demonstrating it improved <u>stigmatising attitudes, knowledge and confidence of 3,712 community based professionals in dealing with suicide prevention and created valuable network capacity between partner organisations (G3, R2-R4).</u>		
Research		
The <u>Preventing Depression and Improving Awareness through Networking in the EU (PREDI-NU) (G4)</u> study followed on from the awareness raising activities of the EAAD to address the problem of access to resources (for both professionals and individuals with depression and		

suicide risk) (R5). PREDI-NU developed and implemented free evidence-based resources for professionals and the public and on-line therapy for people experiencing depression (ifightdepression.com). **PREDI-NU provides knowledge and treatment to thousands, especially in low income countries.**

Record linkage is used to understand psychiatric emergencies (including those at risk of suicide) and to improve their care pathways in Scotland (G5). Maxwell, with Duncan, have continued their focus on suicide prevention work in Scotland in understanding and responding to psychiatric emergencies (suicide risk) (G5, R6). One study (conducted 2015-2016) linked data relating to Scottish Ambulance service psychiatric emergencies and self-harm with Emergency Department (ED), and Acute & Mental Health episode and deaths data, following individuals for at least 12 months. It found that 9014 calls were made by 6802 people. More than half of the people (62%) attended by the SAS were either left at home (11%) or discharged from ED with no known follow-up (51%). Sixteen percent of calls were part of complex ('other') pathways. Within 12 months of their emergency call, 279 of the 6802 people (4.1%) had died, 97 (35%) recorded as suicide. This led to a request for Duncan and Maxwell to help with further NHS data interrogation to support the Government and the NHS to develop new responses and care pathways. This further analysis (S7) demonstrated that, over a 5-year period, mental health related journeys in the out-of-hours period: (1) represented 4 times as many journeys through NHS 24 than indicated by standard analyses; (2) were responsible for 27% of Scottish Ambulance Service journeys, and that these journeys were a marker for patients at high risk of completed suicide; (3) were significantly longer (i.e. had more steps) and more variable than for those without mental health problems (4) resulted in longer waiting times in A&E, and were less likely to result in a clear A&E diagnosis; and crucially (5) could ultimately be resolved by telephone contact in around 60% of cases.

Developing and evaluating an intervention to respond to mental distress. Based on the 'best practice' model of community based training to support awareness raising, detection and onward referral or signposting for people experiencing depression/mental distress/suicide risk (R1-R5), Maxwell was responsible for the co-development of the Distress Brief Intervention (DBI) (on behalf of NHS Scotland and Scottish Government) to provide a rapid response to those experiencing (mental) distress (G6). This includes developing training for those delivering the DBI.

3. References to the research

- R1.** Hegerl *et al.* (2009) Optimising suicide prevention programs and their implementation in Europe (OSPI Europe): an evidence-based multilevel approach. *BMC Public Health* 9:428 (Stirling authors: **Maxwell**). DOI: [10.1186/1471-2458-9-428](https://doi.org/10.1186/1471-2458-9-428).
- R2.** Coppens *et al.* (2017) Effectiveness of General Practitioner training to improve suicide awareness and knowledge and skills towards depression. *Journal of Affective Disorders* 227:17-23 (Stirling authors: **Maxwell**). DOI: [10.1016/j.jad.2017.09.039](https://doi.org/10.1016/j.jad.2017.09.039).
- R3.** Arensman *et al.* (2016) Effectiveness of Depression–Suicidal Behaviour Gatekeeper Training among police officers in three European regions: Outcomes of the Optimising Suicide Prevention Programmes and Their Implementation in Europe (OSPI-Europe) study. *International Journal of Social Psychiatry*, 62(7):651-660. (Stirling authors: **Maxwell, Harris**). DOI: [10.1177/0020764016668907](https://doi.org/10.1177/0020764016668907).
- R4.** Hegerl U, **Maxwell M, Harris F, Koburger N, Mergl R, Szekely A, et al.** (2019) Prevention of suicidal behaviour: Results of a controlled community-based intervention study in four European countries. *PLoS ONE* 14(11): e0224602.m DOI: [10.1371/journal.pone.0224602](https://doi.org/10.1371/journal.pone.0224602)
- R5.** Arensman E, *et al.* (2015) Depression Awareness and self-management through the internet: protocol for an internationally standardized approach. *JMIR Res Protoc.* 6;4(3):e99 (Stirling authors: Maxwell, Harris). DOI: [10.2196/resprot.4358](https://doi.org/10.2196/resprot.4358)
- R6.** **Duncan EAS, Best C, Dougall N, Skar S, Evans J, Corfield AR, Fitzpatrick D, Goldie I, Maxwell M, Snooks H, Stark C, White C and Wojcik W.** Epidemiology of emergency ambulance service calls related to mental health problems and self-harm: a national record linkage study. *Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine* (2019) 27:34 DOI: [10.1186/s13049-019-0611-9](https://doi.org/10.1186/s13049-019-0611-9).

Grants

- G1.**European Commission partner on European Alliance Against Depression (EAAD). PI: Prof Hegerl (Germany); PI (Scotland): **M Maxwell**. Total across all three phases: EUR2,506,051.
- G2.**Scottish Executive additional funding for implementation, evaluation and knowledge transfer of EAAD in NHS Lothian (Lothian Alliance Against Depression (LAAD)). PI: **M Maxwell**. GBP100,000.
- G3.**European Commission FP7. Optimising Suicide Prevention Interventions (OSPI). PI: Prof Hegerl (Germany). WP Leader and lead partner for UK: **M Maxwell**. EUR2,971,901.
- G4.**EU Public Health Programme EAHC. Preventing Depression and Improving Awareness through Networking in the EU (PREDI_NU) PI: Prof. Hegerl (Germany), Co-I and lead for UK **M Maxwell**. EUR1,834,454.
- G5.**Chief Scientist Office. Using record linkage analysis to inform the development of alternative care pathway(s) for psychiatric and self-harm emergencies currently transferred by ambulance to Emergency Departments. PI: **E Duncan**. Co-I: **M Maxwell, J Evans, D Fitzpatrick**. GBP30,000
- G6.**NHS Scotland. Development and review of educational resources to support the DBI pilot phase. PI **R OConnor** (University of Glasgow), Co-I **M Maxwell**. GBP 224,064. (Oct 2016-Dec 2018)

4. Details of the impact

Impact 1: Helping millions through the iFightDepression website

The [iFightDepression](#) website (**S1**) raises awareness of depression and suicidal behaviour and provides a self-help psychological intervention for people with depression that is founded on research. It is designed to be used by the broad public: adults and young people, family and friends, community professionals and health care professionals. It was launched in April 2014 (**S1**) and initially provided a service in the languages of the countries that were involved in its development as members of the PREDI-NU project: Germany, Ireland, Portugal, Estonia, Hungary, Bulgaria, Luxembourg, Austria, the United Kingdom (University of Stirling) and Spain. Further translation has meant the website, its resources, and tools are now available in an additional eight languages: Albanian, Arabic, Catalan, Dutch, French, Italian, Russian, and Turkish, making it available to many millions more people with depression. Translation into [Arabic](#) has allowed for the iFightDepression website to reach refugee, asylum seeking and migrant populations (**S1**) which have been identified by the United Nations High Commissioner for Refugees, the International Organisation for Migration, the International Association for Suicide Prevention and the World Federation for Mental Health as a priority population with high levels of depressive disorders, post-traumatic stress disorder, and suicidal ideation and behaviour.

With enormous reach, the impact from this website has made a difference to millions of lives and will impact on countless more. Analytics show that from May 2018 (when full analytics became available) to Dec 2020, the website attracted a total of **6,327,838 unique visitors** across all languages, with particularly large visitor-numbers to the Spanish-language site (41% of visitors) and Russian-language site (19% of visitors). Of these, **4,761,031 visitors used the 'self-test' questionnaire** that allows them to start a programme of self-management. A surge in visitors during the COVID-19 pandemic (Figure 1) suggests that the website may have been a valuable resource when in-person treatments were more difficult to access (**S2**).

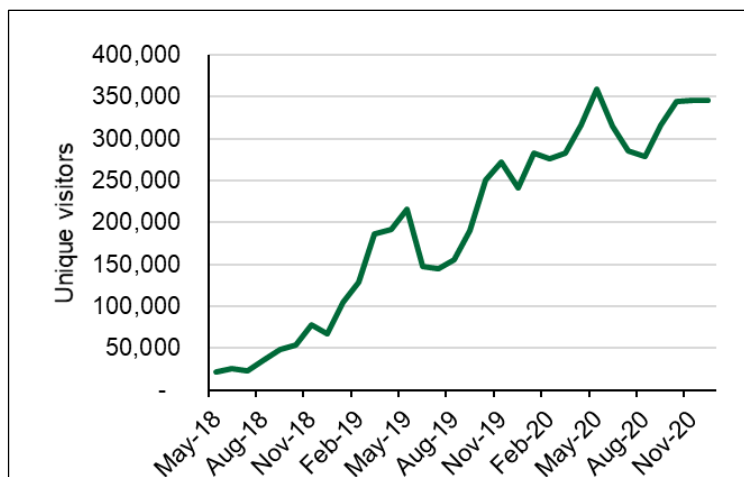


Figure 1. Unique visitors to the iFightDepression website (all languages except Arabic), May 2018 to Dec 2020. Source: Google Analytics (**S2**).

Assessment of iFightDepression's Efficacy

Independent evaluations were conducted in the pilot stages of the iFightDepression website (October 2013 and May to August 2014), including a survey with 156 healthcare professionals who were trained in the use of iFightDepression and 198 patients who had used the website. Results showed that 97% found the content to be credible, and 100% found the content to be useful. This evaluation also indicates that general practitioners and psychotherapists refer patients to the website to complement other treatments, such as medication. GPs were able to use the website to directly help patients, whereas without it their only recourse would have been to refer patients to psychotherapy, with an inevitable long treatment waiting time. Indeed, the website was used to help patients who were already on such a waiting list for psychotherapy. Psychotherapists reported that the tool enabled a reduction in the number of therapeutic sessions needed for patients. The ease of accessibility and the fact that the website is free were also highlighted as major advantages for patients unable to afford counselling and for those who had inhibitions about accessing help through traditional treatment pathways (S3).

As one patient in a focus group stated:

"...What I especially liked about the tool was the module about integrating positive activities into daily routine. Often, if other things (like school) seem very important, it's easy not to pay yourself enough attention. But now I think about doing things that I enjoy and that I like. I didn't do this before." (S4. Tool user (age 17), Germany)

Another user testified to the added value to treatment that iFightDepression provides:

"...I think that this programme, especially while waiting for face-to-face therapy or as continuation after psychotherapy, could be a good support for depressed people." (S4. Tool user (age 43), Germany)

A healthcare professional commented that the website had an empowering effect on patients by allowing them to take control and guide their own treatment: "they can work through a programme themselves and learn skills and practice it... that's powerful for a person." (S4. Healthcare professional, Ireland.)

An independent 2020 study into the efficacy of the iFightDepression website, conducted against a control group (total sample size of 348 patients with mild-to-moderate depressive symptoms or dysthymia), found that after three months of using the website, patients, on average, reported decreased symptoms of depression and that "Over the entire observation period, the iFD tool was superior to an active control in the reduction of symptoms of depression ... and in the improvement of quality of life" (S5, p.15).

Impact 2: Helping to support the development of new responses and care pathways for psychiatric emergencies across Scotland

A stakeholder workshop (making use of the findings from G5 (R6) to develop alternative care pathways) involving 35 participants (representing: Scottish Ambulance Service; Emergency Departments across Scotland; Primary Care; Social Work; Police Scotland; The Mental Welfare Commission; 3rd sector organisations; and the University Sector) found that: almost all (93%, n=27) participants perceived the study findings to be 'very useful' or 'quite useful' in understanding the patient population; almost all (90%, n=22) participants found the data to be 'very useful' to 'quite useful' in developing evidence-informed alternative care pathways; and 24 people (75%) reported that using data-informed care pathway process mapping was a 'highly' to 'extremely useful' method to identify potential care pathway/intervention development opportunities (S6, p.10).

Building on this, Maxwell and Duncan (R6, G5) were invited by the Scottish Government to join a working group to lead further data interrogation which underpinned the case for a specialist mental health response that was embedded within NHS 24's 111 service in 2019, available to callers at the first point of contact. The 'Enhanced Mental Health Pathways' project was established (budget estimated GBP2,000,000), meeting action 14 of the SG Mental health Strategy 2017-2027 (S7). Dedicated mental health nurses have been recruited to staff NHS24 111 to provide front line patient care, and calls made by people in distress to the 111 service are now diverted to these staff, where calls are triaged, care provided, or escalated as necessary.

As the Associate Medical Director for Mental Health at NHS 24 stated:

“the work was crucial in securing substantial funding to provide the service, which is now available nationally 24/7, and is answering over 2,000 calls per week from those in mental health crisis. The working group’s analysis has been borne out in practice, and NHS 24’s Mental Health Hub is consistently able to resolve 60-65% of calls with no onward referral, demonstrating that more patients are receiving the right care at the right time.” (S7)

This mental health service is therefore dealing with an estimated approximate **100,000 calls per annum**, benefitting many thousands of people across Scotland.

Impact 3: Helping to respond to the mental health crisis/distress across Scotland

The Distress Brief Intervention (DBI) programme provides the offer of next day contact with a distress worker from a third sector background to anyone presenting in distress to A&E, police, ambulance services, and primary care. It has been **funded by GBP3,400,000** from Scottish Government. Since going live in 2017, four pilot sites in Aberdeen, Lanarkshire, Borders and Highlands have **successfully helped more than 13,000 people, by delivering packages of supportive listening and problem solving (S8a)**. The impact of DBI was recognised by its receipt of a Scottish Health Award in 2019 (S8b).

The training programme was University of Glasgow-led with Stirling’s Maxwell as co-I being essential to its initial development and the theoretical model underpinning the interventions, all of which draw from the best-practice developed in her previous work on the 4-level approach (R1-R5, EAAD and PREDI-NU). The DBI programme built on this prior work by creating workforce skills, knowledge, and confidence, therefore enabling it to achieve the large-scale impacts it has. Maxwell also supported service user research into implementation requirements for DBI and reviewed the training protocols before they were implemented (S9). The staff delivering both Level 1 and Level 2 DBI report improvements in collaborative working and an improved culture of compassion. Staff also report improved staff experience through being able to meet the needs of people in distress through the option of being able to refer people to DBI (S8c, p.5). Building on the success of the DBI, the 2018 Programme for Government extended the programme to under 18s during 2019 (S8d), placed it within the Scottish Government’s Mental Health Strategy (S10), and identified it as a key response to the mental health crisis during the Covid-19 pandemic (S8e).

5. Sources to corroborate the impact

- S1. iFightDepression website, <https://ifightdepression.com> (includes links to other language versions. Arabic version: <https://tool.ifightdepression.com/ar/login?languageswitch=1> Launch event in 2014 at the European Parliament: <http://stir.ac.uk/4zu>)
- S2. iFightDepression website analytics.
- S3. Coppens E., et al., Evaluation Report PREDI-NU Work Package 3, LUCAS Centrum voor Zorgonderzoek & Consultancy (August 2014), see pp.23-24, 53-55.
- S4. PREDI-NU News Bulletin (September 2014).
- S5. Oehler C., et al., Efficacy of a Guided Web-Based Self-Management Intervention for Depression or Dysthymia: Randomized Controlled Trial With a 12-Month Follow-Up Using an Active Control Condition J Med Internet Res (2020) 22(7):e15361. DOI: [10.2196/15361](https://doi.org/10.2196/15361)
- S6. CSO report with workshop feedback. p.10.
- S7. Letter of support from Assoc. Medical Director for Mental Health at NHS24
- S8. a. <https://www.dbi.scot/general/distress-brief-intervention-service-dbi-passes-10000-interventions/>
 b. <https://www.dbi.scot/general/dbi-wins-scottish-health-award/>
 c. DBI Programme Manager’s Six Monthly Report October 19 – March 20 Issue 7 (July 2020), p.5. <https://www.dbi.scot/resources/progress-reports/>
 d. <https://www.dbi.scot/general/scottish-government-support-to-expand-dbi-to-under-18s/>
 e. <https://www.dbi.scot/general/dbi-helping-people-cope-during-covid-19/>
- S9. Testimonial: Rory O’Connor, Professor of Health Psychology, University of Glasgow, PI on DBI programme.
- S10. Scottish Government Mental health Strategy 2017-2027, p.19-20. <https://www.gov.scot/publications/mental-health-strategy-2017-2027/>