IMPARTS and assessment of suicide risk in medical settings

Jane Hutton
24th August 2016

Contact us: imparts@kcl.ac.uk
Find us: www.kcl.ac.uk/iop/depts/pm/research/imparts
Follow us: @IMPARTSP
Introducing IMPARTS

Integrating Mental & Physical healthcare: Research Training & Services

• Aim:
  To improve the mental healthcare of patients presenting in physical healthcare settings at Guy’s, St Thomas’ and King’s College Hospitals
The IMPARTS package

Informatics
• Routine collection of patient-reported outcomes with advice on care & referral

Care pathways
• Developing mental health care pathways for patients identified via screening

Training
• Training in mental health skills with ongoing supervision from a mental health specialist

Self-help
• Portfolio of bespoke self-help materials, tailored to specific physical conditions

Research
• Research database
• Development and evaluation of new interventions
The IMPARTS screening interface

- A web-based screening interface to improve detection and management common mental health problems in a diverse range of physically ill populations
  - patient-reported mental and physical health outcome measurement
  - embedded in routine clinical practice
  - informs patient care and referral in real-time

> IMPARTS flags up any psychological issues to address prior to consultation
Screening procedure

1. Patients arriving for appointment are given information sheet explaining purpose of screening

2. Patients log on to an iPad in the waiting room, using their Hospital ID and initials

3. Patients complete a series of short measures tailored to their physical condition

4. Patients responses transfer directly to the Electronic Patient Record

Measures - examples

- Depression
- Anxiety
- Quality of life
- Medication adherence
- Alcohol dependence
- Smoking
- Drug use
- Fatigue
- Pain
- Cough severity
- Limb function
- Endocarditis symptoms
- Eczema allergy screening questions
**Dressing and Grooming - Are you able to:**
- Dress yourself, including tying shoelaces and doing buttons?  
  - Without any difficulty: □
  - With some difficulty: √
  - With much difficulty: □
  - Unable to do: □
- Shampoo your hair?  
  - Without any difficulty: √
  - With some difficulty: □
  - With much difficulty: □
  - Unable to do: □

**Rising - Are you able to:**
- Stand up from an armless straight chair?  
  - Without any difficulty: √
  - With some difficulty: □
  - With much difficulty: □
  - Unable to do: □
- Get in and out of bed?  
  - Without any difficulty: □
  - With some difficulty: □
  - With much difficulty: □
  - Unable to do: □

**Eating - Are you able to:**
- Cut your meat?  
  - Without any difficulty: □
  - With some difficulty: □
  - With much difficulty: □
  - Unable to do: □
- Lift a full cup or glass to your mouth?  
  - Without any difficulty: √
  - With some difficulty: □
  - With much difficulty: □
  - Unable to do: □
- Open a new carton of milk?  
  - Without any difficulty: √
  - With some difficulty: □
  - With much difficulty: □
  - Unable to do: □

**Walking - Are you able to:**
- Walk outdoors on flat ground?  
  - Without any difficulty: √
  - With some difficulty: □
  - With much difficulty: □
  - Unable to do: □
- Climb up five steps?  
  - Without any difficulty: □
  - With some difficulty: □
  - With much difficulty: □
  - Unable to do: √
**OVER THE LAST 2 WEEKS**, how often have you been bothered by any of the following problems?

<table>
<thead>
<tr>
<th></th>
<th>Not at all</th>
<th>Several days</th>
<th>More than half the days</th>
<th>Nearly every day</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Little interest or pleasure in doing things?</td>
<td></td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
</tr>
<tr>
<td>2) Feeling down, depressed, or hopeless?</td>
<td></td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
</tr>
<tr>
<td>3) Trouble falling or staying asleep, or sleeping too much?</td>
<td></td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
</tr>
<tr>
<td>4) Feeling tired or having little energy?</td>
<td></td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
</tr>
<tr>
<td>5) Poor appetite or overeating?</td>
<td></td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
</tr>
<tr>
<td>6) Feeling bad about yourself - or that you are a failure or have let yourself or your family down?</td>
<td></td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
</tr>
<tr>
<td>7) Trouble concentrating on things, such as reading the newspaper or watching television?</td>
<td></td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
</tr>
<tr>
<td>8) Moving or speaking so slowly that other people have noticed? Or the opposite - being so fidgety or restless that you have been moving around a lot more than usual?</td>
<td></td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
</tr>
<tr>
<td>9) Over the last two weeks have you had thoughts that you would be better off dead or of hurting yourself in some way?</td>
<td></td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
</tr>
<tr>
<td>10) You have indicated that you have some of the problems on this questionnaire. How difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?</td>
<td></td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
</tr>
<tr>
<td></td>
<td>Not difficult</td>
<td>Somewhat difficult</td>
<td>Extremely difficult</td>
<td></td>
</tr>
</tbody>
</table>

**Next »>**
**25/04/2012 13:38:47 VAS (Rheumatology)**  Fatigue:50, Pain:30

**25/04/2012 13:38:59 PHQ9 (Rheumatology)** Probable Major Depression. Referral To: Liaison Psychiatry  🟡Suicidal Thoughts

<table>
<thead>
<tr>
<th>PMI</th>
<th>Group</th>
<th>Type</th>
<th>Score</th>
<th>Description</th>
<th>Referral</th>
<th>Alert</th>
</tr>
</thead>
<tbody>
<tr>
<td>S696696</td>
<td>Rheumatology</td>
<td>PHQ9</td>
<td>19</td>
<td>Probable Major Depression</td>
<td>Liaison Psychiatry</td>
<td>Suicidal Thoughts</td>
</tr>
</tbody>
</table>

1. Little interest or pleasure in doing things?
2. Feeling down, depressed, or hopeless?
3. Trouble falling or staying asleep, or sleeping too much?
4. Feeling tired or having little energy?
5. Poor appetite or overeating?
6. Feeling bad about yourself - or that you are a failure or have let yourself or your family down?
7. Trouble concentrating on things, such as reading the newspaper or watching television?
8. Moving or speaking so slowly that other people have noticed? Or the opposite - being so fidgety or restless that you have been moving around a lot more than usual?
9. Thoughts that you would be better off dead or of hurting yourself in some way?

<table>
<thead>
<tr>
<th>PMI</th>
<th>Group</th>
<th>Type</th>
<th>Score</th>
<th>Description</th>
<th>Referral</th>
<th>Alert</th>
</tr>
</thead>
<tbody>
<tr>
<td>S696696</td>
<td>Rheumatology</td>
<td>GAD7</td>
<td></td>
<td>No problems with anxiety</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. Feeling nervous, anxious or on edge? 0 (Not at all)
2. Not being able to stop or control worrying? 0 (Not at all)
Referrals for anxiety and depression
Referral pathway

- **Suicidal ideation AND severe depression (PHQ-9 score=20-27)**
  - Urgent referral to liaison psychiatry

- **Suicidal ideation OR severe depression (PHQ-9 score=20-27)**
  - Referral to liaison psychiatry

- **Mild to moderately severe depression (PHQ-9=<19) WITH complex interaction with medical problem**
  - Referral to specialist clinical psychology

- **Mild to moderately severe depression (PHQ-9=<19) WITHOUT complex interaction with medical problem**
  - Referral to IAPT
Staff Training – Individual services

**General**
Assessing & responding to depression & suicide risk

**Specific**
Hand therapy: Motivation, depression & fear of movement

**General**
Motivational interviewing techniques for healthier living

**Specific**
Hand therapy: Trauma & predictors of PTSD

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Identify training needs

Bespoke training delivery

Review
Staff Training: Mental health skills for non-mental health professionals

Day 1: The Anxious/Distressed/Depressed Patient
Day 2: The Confused/Agitated Patient
Day 3: The Substance Misusing Patient
Day 4: Managing Conflict
Day 5: The Patient with Medically Unexplained Symptoms

- 5 day teaching course, MSc Level 7, 15 credits
- Next course: 1 day per week - Starting July 6, 2016

http://www.kingshealthpartners.org/education-and-training/mind-and-body
Living with Health Problems

Health problems can make us feel unhappy, scared or angry. These strong feelings can be frightening in themselves, but they are very normal. Having a health problem can be distressing for all sorts of reasons. You may be in pain or have other unpleasant symptoms. You may be worried about how these symptoms will affect your life, or feel that you have lost control over your life or your body.

There are many things you can do to take back some control. This leaflet gives you some ideas to help you get started.

Understanding your mind and body
Your mind and your body are closely linked. Each of the five things in the diagram below can affect all of the other four. For example, pain can make you feel scared or frustrated, as well as making you think negatively about the future. This can work the other way round, too. Thoughts and feelings can affect your body in many ways. For example, your muscles may tense up and your breathing may become faster and less deep. These changes can make pain worse.

The good news is that you can reverse these effects by:
- changing the way you breathe
- thinking and doing things differently.

Making the most of your life

- Are you finding it hard to cope with your health problems, and with not being able to do as much as you used to?
- Are you worried about the future, and about being a burden on your family?

The way you feel
If you have long-term health problems, you may need to adapt to manage many changes in your life. Your body may look different, you may be living with pain and other symptoms, you may be less able to get around and do the things you usually do, and you may need to spend a lot of time at hospital. It can be difficult to let go of wishing things were the way they used to be.

How we react to health problems can make a big difference to the effect they have on our lives. Everyone is different, and has different ways of coping. This booklet contains advice and ideas which you might find helpful.

If distressing feelings go on for several weeks, or are making it difficult for you to get on with your life, talk to your health professional about seeing a specialist who can help you.
Living with psoriasis: How are you coping?

Psoriasis can be difficult to live with. As well as the physical aspects of the condition, it can also be emotionally tough to cope with.

- Not being able to predict flare-ups
- Being stared at
- Physical discomfort
- People assuming it’s contagious
- Trying to manage it

These are just some of the difficulties that people with psoriasis have described.

The good news is that there are ways of dealing with the difficult emotions that psoriasis can bring. This leaflet is designed to introduce some suggestions and ideas from Acceptance and Commitment Therapy—a type of therapy proven to be effective in helping people live well with other chronic conditions. There are a number of ideas and perspectives—see if any are helpful for you.

How could this leaflet help me?

Acceptance and Commitment Therapy is about accepting the things that can’t be changed, while still carrying on with your life. It involves continuing to follow your goals even if you are feeling tired, depressed or anxious, and even if your psoriasis is bad.

So, what do you value?

In order to live the life you want, getting a clear idea of what you value in your life is vital. Some people might value their career over everything, others might be really committed to seeing themselves as a sociable person, others might value their family life. There are many different things we value about our lives, covering work and leisure, health, spiritual fulfillment and our relationships. What is important to you?

Look at the bull’s eye on the next page. In each section, put a cross where you think you are, marking the cross in the centre of the bull’s eye if it is totally in touch with your values, and further outside if you are out of touch with your values.
We have ethical approval to prospectively request consent for contact via the IMPARTS interface.

“I agree that a researcher can contact me to ask me if I’m willing to take part in a research project”

- Yes
- No
- More information

If the patient consents, it is possible to de-anonymise their record, enabling a researcher to contact them.
Research opportunities: cross-sectional

**Prevalence; Associations**

- Depression
- Anxiety
- PTSD
- Smoking, drug & alcohol misuse
- Physical symptoms (e.g. fatigue, pain); biomarkers
- Health beliefs & behaviours e.g. non-adherence

Renal, MS, Cancer, Heart failure...
Research opportunities: longitudinal

Trajectories and outcomes of depression, anxiety in different clinical populations
Recent and upcoming publications


• Rayner et al. Mental disorder in limb reconstruction: prevalence, associations and impact on occupational functioning. Revise and resubmit to Journal of Psychosomatic Research.

• Hames et al. Prevalence of mental disorder in patients attending a liver transition service. Under review at Liver Transplantation.

• Matcham et al. Association between smoking and mental disorder in patients with long term conditions. Under review at General Hospital Psychiatry.

The story so far.....
Services at KCH

- Rheumatology
- Limb reconstruction
- Facial trauma
- Psoriasis
- Vulval disorders
- Cough
- Adolescent liver
- Temporo-mandibular jaw pain
- Endocarditis
- Stroke
- Neuroendocrine tumour
- Cranioplasty
- Musculoskeletal physiotherapy
- Inflammatory bowel disease
- High blood pressure in pregnancy
- Paediatric Hepatitis
- Hepatitis B
- Parkinson’s disease
- Dental surgery
- Heart failure
- Headache
- Specialist medicine
- Nerve injury
- Orofacial pain
- Pain
- Diabetes
- Renal
- Adult cystic fibrosis
- Hand trauma
- Orthopaedic hip/knee Replacement

KING’S HEALTH PARTNERS
Services at GSTT

- Diabetes
- Adult Congenital Heart Disease
- Dermatology: Psoriasis, HS, Eczema
- Teenage and Young Adult Cancer

- Kidney Transplant review & support
- Dialysis Satellite Units
- Palliative care
- ICU follow up

- Congenital heart disease - transition
- Rheumatology
- Paediatric services
- Living organ donor

- Balance clinic
- Facial palsy
Acceptability of screening

Proportion of patients declining screening:

<table>
<thead>
<tr>
<th>CLINIC</th>
<th>Pts approached</th>
<th>Pts declining screening n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rheumatology</td>
<td>296</td>
<td>15 (5.1)</td>
</tr>
<tr>
<td>Limb reconstruction</td>
<td>177</td>
<td>7 (4.0)</td>
</tr>
<tr>
<td>Hepatitis C</td>
<td>65</td>
<td>6 (9.2)</td>
</tr>
</tbody>
</table>
Screening numbers

Total number of screening encounters: 21842
N=Age: 45.5 (10.4)
Gender: 54.6% female

Screening encounter 1: N = 11865
Screening encounter 2: N = 3931
Screening encounter 3: N = 2039
Screening encounter 4: N = 1285
### Groupings by prevalence of probable MDD

<table>
<thead>
<tr>
<th>Low prevalence &lt;5%</th>
<th>Moderate prevalence 5-15%</th>
<th>High prevalence 15-50%</th>
<th>Extreme prevalence &gt;50%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult congenital heart disease review</td>
<td>Psoriasis</td>
<td>Hidradenitis suppurativa</td>
<td>Pain clinic</td>
</tr>
<tr>
<td>Antenatal clinic</td>
<td>Dialysis</td>
<td>Rheumatology</td>
<td></td>
</tr>
<tr>
<td>Renal transplant attending review</td>
<td>Endocarditis</td>
<td>Trauma</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Failing renal transplant patients</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>TMJ pain clinic</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>ICU follow up</td>
</tr>
</tbody>
</table>
## Wellbeing and health behaviours

<table>
<thead>
<tr>
<th></th>
<th>N completed</th>
<th>Mean</th>
<th>N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain (score /100)</td>
<td>1268</td>
<td>44.0</td>
<td></td>
</tr>
<tr>
<td>Fatigue (score /100)</td>
<td>4379</td>
<td>40.3</td>
<td></td>
</tr>
<tr>
<td>Alcohol: Hazardous/harmful drinking</td>
<td>1215</td>
<td></td>
<td>171 (14.2)</td>
</tr>
<tr>
<td>Smoking: Current smokers</td>
<td>10309</td>
<td></td>
<td>1897 (18.4)</td>
</tr>
<tr>
<td>Would like help to quit</td>
<td>1381</td>
<td></td>
<td>503 (36.4)</td>
</tr>
</tbody>
</table>
Future Developments

• Widening access:
  • languages
  • people with intellectual disabilities
  • paediatrics

• IMPARTS in the community/at home – develop app/outside Trust wifi

• Physical health in patients with mental health difficulties
The Team

Prof Matthew Hotopf, Project Director
Dr Jane Hutton, Consultant Clinical Psychologist
Dr Lauren Rayner, Project Lead
Anna Simpson, Project Coordinator
Jennifer Nicholas, Research Worker
Sanchika Campbell, Research Worker

Email us on: imparts@kcl.ac.uk
Visit us at: www.kcl.ac.uk/iop/depts/pm/research/imparts
Follow us: Twitter @IMPARTSP
Patients who screen positive for suicidal thoughts

• If a patient responds “more than half the days” or “nearly every day” to Item 9 of the PHQ-9: “Have you been bothered by thoughts that you would be better off dead or of hurting yourself in some way”, a suicide alert will appear in the database.

• Guide is not intended to replace clinical judgement.

• High proportion of people have suicidal ideas.

• Aim is to screen for risk which requires further action.
Step 1: Are thoughts current?

• Check if they have been having these thoughts in the last 2 weeks
  – If no, make a routine referral
  – If yes, move to Step 2
Step 2: Hopelessness and suicidal ideation

- “Do you feel life is not worth living?”
- “Are you feeling hopeless about the present or future?”
- “Have you had any thoughts about taking your own life?”
  - If no, make a routine referral
  - If answer to any question is yes or there is any ambivalence, move to Step 3
Step 3

Assess Suicidal Plans
• “Have you made plans for how you would do it?”
• “Do you have the means to carry them out?”
• “Have you considered what might stop you?”

Ask about Previous Attempts
• “Have you ever tried to end your life before?”

Ask about Recent Life Stressors
• “What has been happening recently...?”
• e.g. worsening physical health, bereavement, anniversary

Ask about Mental Health Problems
• “Have you ever suffered with a mental health problem such as depression?”

Assess Social Support / Safety
• “Is there anyone you can confide in or turn to for support?”
Action points

• Offer early appointment and assess ability to commit to keeping self safe until then
• Discuss ways of keeping safe e.g. being with people.
• Advise patient to attend A&E if in crisis
• If you have **immediate concerns** about safety, and the patient presents with
  Hopelessness OR Suicidal Ideation AND
  Plan AND/OR Previous Attempt AND/OR Life stressor
  AND/OR Mental Health Problem AND/OR Social isolation
• Then offer to take patient to A&E
• Seek advice if unsure
• Discuss any concerns e.g. they will meet a psychiatric nurse used to helping people in similar situations, care is provided in the community wherever possible
Taking a patient to A&E

• Call A&E to inform them that you are bringing a patient with suicidal risk

• Give structured written handover to the triage nurse, making it clear that the patient has screened positive for suicidal ideation on IMPARTS

• Patients will be given a face to face crisis assessment by an experienced psychiatric nurse. The patient may need to wait for up to an hour to receive an assessment

• As soon as the patient is handed over to the triage nurse they become the responsibility of A&E and no further action is needed from referrer
Reasons for bringing the patient to A&E (Please tick all that apply and add notes below any question if necessary)

• Is there a Suicidal Thoughts alert on EPR? Y/N
• What is the patient’s total score on the PHQ-9?
• What is the patient’s score on the suicidal thoughts item (item 9) on the PHQ-9?
• Has patient screened positive for Probable Major Depression? Y/N
• Has patient had suicidal thoughts in last 2 weeks? Y/N
• Does patient express hope for the future? Y/N
• Does patient have detailed suicide plans? Y/N

Please outline any details known
Note to accompany a patient taken to A&E

• Has patient previously attempted suicide? Y/N
  Please outline when and how, if known
• Does patient have severe recent life stressor(s)? Y/N
  Please outline
• Does patient have other mental health problems? Y/N
  Please outline
• Does the patient have social support? Y/N
  Please outline
• Has liaison psychiatry (Bleep 278) been called for advice?
• Please summarise advice and any other considerations below
Communication with GP

• If the patient declines the offer to go to A&E, they are free to go
• Referrer should communicate situation to GP urgently by phone
• Bear in mind that the GP may know the patient well and be aware of long-standing mental health difficulties
• Communicate positive screen, PHQ-9 total and item 9 scores
• Summarise relevant discussion with patient
• Explain discussion re A&E and any advice received
• Discuss what further action GP can take
Does Response on the PHQ-9 Depression Questionnaire Predict Subsequent Suicide Attempt or Suicide Death?

- Simon et al (2013), large integrated health system in Washington State and Idaho
- 84000 outpatients with depression, 207265 questionnaires over 4 years
- Followed up until end of study period, death or disenrolment
- 709 subsequent suicide attempts and 46 suicide deaths
- Patients who reported thoughts of death or self-harm “more than half the days” or “nearly every day” experienced a markedly increased risk of subsequent suicide attempt and suicide death
Prevalence of suicidal thoughts

• Response to item 9 regarding thoughts of death or self-harm was “not at all” in 77% of cases, “several days” in 14% of cases, “more than half the days” in 5% cases, and “nearly every day” in 4% cases.

• IMPARTS: 4.4% on at least “more than half the days”

• Not depressed sample
Cumulative risk of suicide attempt or death over one year

- Risk of attempt increased from .4% among those reporting thoughts of death or self-harm “not at all” to 4% among those reporting thoughts of death or self-harm “nearly every day”
- After adjustment for age, sex, treatment history, and overall depression severity, item 9 remained a strong predictor
- Risk of death increased from .03% for “not at all” to .3% for “nearly every day”
- Item 9 remained a moderate predictor of subsequent suicide death after same adjustments
- Depression severity was also significant predictor of both after same adjustments
Cumulative risk of suicide attempt or death among 84418 responders to PHQ-9 item 9 in 2007–2011.
Cumulative risk of suicide death among 84418 responders to PHQ-9 item 9 in 2007–2011
PHQ-9 item 9 has role in identification of risk of suicide attempt and death

• The 13% of patients who reported thoughts of death or self-harm “more than half the days” or “nearly every day” accounted for 53% of suicide attempts and 54% of suicide deaths

• Increased risk emerged over several days and persisted for several months, indicating that suicidal ideation was an enduring vulnerability

• Absolute rates remain low and denying thoughts of death or self-harm ideation on the PHQ-9 certainly does not rule out risk of subsequent suicide attempt
Any Questions?

IMPARTS@kcl.ac.uk