Tailoring implementation strategies: An example from diabetes management in primary care
Overview

• Tailoring implementation strategies

• An example from diabetes management in primary care

• Tensions in the tailoring process

• HRB RL Award ‘CUSTOMISE’ project
Tailoring implementation strategies

- Recommended to address the unique needs of an implementation effort

- Staged process
  - Assessing factors that influence implementation
  - Selecting and designing strategies to address context-specific factors

- Strategies tailored to address identified barriers to change more likely to improve professional practice than no intervention or the dissemination of guideline [Baker et al, 2015]
Key ingredients in the tailoring process

1. Relevant theory

2. Evidence

3. Stakeholder feedback and participation

~ Transparent and replicable process

Improving Diabetes Eye-screening Attendance study (IDEAs)

An example of tailoring implementation strategies in primary care

Team: Dr Fiona Riordan, Ms Emmy Racine, Prof. Patricia Kearney, Prof. Susan Smith, Prof. John Browne, Dr Aileen Murphy
Diabetic retinopathy screening

- Worldwide ≈ 28 million individuals have vision-threatening retinopathy

- One of the leading causes of blindness among adults of working age

- Screening is effective and recommended but uptake is suboptimal in many countries including Ireland (67%) (Pandey et al 2020)

Uptake can be improved

- Narrow range of behaviour change techniques (BCTs)
- Few document user involvement
- Few focus on primary care or target both professionals and people with diabetes

Our aims

1. Develop a tailored multifaceted intervention targeting both professionals and patients

2. To investigate the feasibility and cost of the intervention to improve the uptake of DRS
1. Developing the implementation intervention

STEP 1: Who needs to do what differently?

STEP 2: What are the barriers & enablers?

STEP 3: What components could address modifiable barriers and enhance enablers?

STEP 4: How can behaviour be measured and understood?

---

STEP 1
Who needs to do what differently?

Audit
63% of those registered participated

STEP 2
What are the barriers & enablers?

Interviews with 22 HCPs and 47 people with DM mapped to theoretical frameworks

3A: Identify BCTs and modes of delivery

STEP 3
What intervention components will address modifiable barriers and enhance enablers?

TDF

CFIR

## Step 2: Barriers & enablers
### Professional-level behaviour (registration)

<table>
<thead>
<tr>
<th>TDF Domain</th>
<th>CFIR construct</th>
<th>Barrier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
<td>Access to knowledge and information</td>
<td>✗ Lack of information on uptake</td>
</tr>
<tr>
<td>Environmental context</td>
<td>Available resources</td>
<td>✗ Time to register patients dependent on practice resources (staff)</td>
</tr>
</tbody>
</table>

Step 2: Barriers & enablers
Patient-level behaviours (consent, attendance)

<table>
<thead>
<tr>
<th>TDF Domain</th>
<th>Barrier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
<td>✗ Lack symptoms; unaware they are at risk</td>
</tr>
<tr>
<td></td>
<td>✗ Confusion around routine eye checks vs screening</td>
</tr>
<tr>
<td>Beliefs about consequences</td>
<td>✗ Anticipating ‘bad result’</td>
</tr>
<tr>
<td></td>
<td>✓ See value of early detection</td>
</tr>
<tr>
<td></td>
<td>✓ Knowing the screening service is free</td>
</tr>
<tr>
<td>Social influences</td>
<td>✓ HCP recommendation to attend</td>
</tr>
<tr>
<td></td>
<td>✓ Trust in HCP</td>
</tr>
</tbody>
</table>
### Step 3A: Mapping to Behaviour Change Techniques

<table>
<thead>
<tr>
<th>Determinant</th>
<th>TDF domain</th>
<th>BCT</th>
<th>Operationalised intervention content</th>
</tr>
</thead>
</table>
| ✓ HCP recommends screening and explains the importance | Social influences  | Information about others’ approval Social support | ➢ GP or nurse provides general encouragement or reassurance to attend appointment.  
➢ GP or nurse expresses hope that the patient will attend screening. |
| ✗ Lack of information on uptake / DNAs           | Knowledge           | Feedback on behaviour                         | ➢ Give HCP feedback on the % of patients who have registered / consented / attended                      |

## Organisational factors

<table>
<thead>
<tr>
<th>CFIR Construct</th>
<th>TDF domain</th>
<th>Theme</th>
<th>Implications for intervention components</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Environmental context</td>
<td>People cannot attend because of competing demands, including being unable to take time off work or having family dependents and other commitments.</td>
<td>Select messages to include in the information materials which highlight it is possible to reschedule to a time which suits them best.</td>
</tr>
</tbody>
</table>
STEP 1
Who needs to do what differently?

STEP 2
What are the barriers & enablers?

- Interviews mapped to theoretical frameworks
- TDF
- CFIR

STEP 3
What intervention components will address modifiable barriers and enhance enablers?

3A: Identify BCTs and modes of delivery

- Mapped BCTs to each domain & created a short-list

3B: Explore acceptability, feasibility & local relevance

Consensus groups
Step 3B: Consensus Meetings

Before the meetings
1. Review evidence summary
2. Rate operationalised BCTs

During the meetings
Discuss acceptability, feasibility and delivery modes

Here is a list of ways to improve diabetes eye screening attendance. We want your opinion on whether these things are acceptable and feasible. When we meet in person, we will talk about who is the best person to deliver some of these messages, and when and how they should be delivered (e.g., in person, using a leaflet, a letter or a text message).

For each statement, please circle one number in the acceptable category and one in the feasible category.

Each number represents the following:
1 = Completely disagree
2 = Disagree
3 = Neither disagree or agree
4 = Agree
5 = Completely agree

For example:

<table>
<thead>
<tr>
<th>Statement</th>
<th>This is acceptable (you like it, and you think it makes sense)</th>
<th>This is feasible (you think it can be done)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prompt practices to register patients</td>
<td>1  2  3  5</td>
<td>1  2  3  4</td>
</tr>
</tbody>
</table>
Feedback from consensus meetings

Rating

✓ Most BCTs were acceptable to ≥ 70% of participants, while the response to feasibility varied

Discussion

✓ Feedback on screening uptake to practices

✓ Reminders/messages from GP/nurse

Avoid ‘scare tactics’ while also being able to ‘dispel a false sense of security’.

✗ ✓ Publicising # attending at the practice

If you say ‘95% of people go to their screening’, [someone may think] ‘Aw sure, I don’t need to go so’. I don't want to be shamed or I don’t want to feel like I am being shamed (Person with diabetes)
Final selection of intervention content

APEASE criteria
Affordability
Practicality
Effectiveness
Acceptability
Side effects
Equity
Sustainability

Consensus meeting feedback
Rapid review of evidence on modes of delivery
Organisational factors
Intervention components
**Professional**

- Audit and feedback
- Electronic prompt
- Reimbursement
- Technical support

**Patient**

- **Practice-endorsed reminders** in person, by phone and letter
- **Information leaflet** targeting key attitudinal and knowledge barriers

**IDEAs PPI panel**

**NALA National Adult Literacy Agency**

**Diabetic RetinaScreen**

**Screening Could Save Your Sight**

**Graphic design**
Cluster randomised pilot trial

- Practices randomly allocated to intervention (n=4) or wait-list control (n=4) (usual care).

- **Process evaluation:**
  - Surveys (n=25 staff).
  - Interviews (n=9 staff and 10 people with diabetes)
  - Research logs

- **Outcomes:**
  1. Acceptability, feasibility and fidelity
  2. Registration and attendance
  3. Cost of delivery

Pilot trial

- Practices recruited through IPCRN and professional networks
  - Eligibility: electronic health record system and a practice nurse.
- Stratification by staff size and deprivation
- Practices were randomly allocated to intervention (n=4) or wait-list control (n=4) (usual care).
Results: Registration & Attendance

All eight recruited practices were retained, and 716 patients audited

<table>
<thead>
<tr>
<th>After 6 months</th>
<th>Intervention</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registrations among patients not registered at baseline</td>
<td>47/52 (90%)</td>
<td>22/25 (88%)</td>
</tr>
<tr>
<td>Attendance among non-attenders at baseline</td>
<td>22/71 (31%)</td>
<td>15/87 (17%)</td>
</tr>
</tbody>
</table>
2. Acceptability & Feasibility

- Intervention **prepared** HCPs to engage with patients about DRS
- Feasible, but perceptions depended on whether **time could be protected**, and whether the intervention was a **good fit with the practice**.
- The intervention was an ‘extra thing’, and there were mixed views on the sustainability of specific aspects.

*See, the phone calls do help, but that can’t happen all the time in general practice. Because you can’t be ringing all of them, and I don’t think single-handed GPs and other GPs will have the time to ring. So, I just wonder that when we see them, opportunistically, I think that is the time that we should remind them about the eye (GP)*
Was it acceptable to people with diabetes?

- Those who received a reminder phone call, appreciated it.
- Acted as behavioural cue but only when they were in the position or mindset to act on it
- Patient-professional relationship influenced actions or intention to act

“Anything he says, I follow....Because I have great faith in him, he’s a fantastic doctor and he’s picked up things in me that no one has ever picked up. And he knows me inside out”
3. Fidelity and Adaptations

Adapted mode

“Well, I just took it from the list, sent it out to the people that I thought best suited a letter, because I knew myself there were some of them that if I sent a letter to, it was not... it was probably going to go in the bin” (PN)

Adapted messages

“I think you’ve got to tailor it to the patient to a certain extent.... I mean, you’ll frighten some patients if you start talking about blindness or whatever, whereas other patients might need to be frightened.... It’s an individualised thing, I think.” (GP)
4. What did it cost to implement?

Based on
• 4 intervention practices
• 363 patients

Total cost
€2,509
€627 per practice
€6.91 per audited patient

Costed two scenarios

Practice nurse completed all tasks
€655 per practice
€7.22 per patient

Some tasks* completed by admin.
€535 per practice
€5.89 per patient

Tensions when tailoring

• Tensions combining theory, evidence and stakeholder feedback
  • Structured vs flexible process
  • Leading with experience vs evidence
  • Group A vs Group B preferences
  • Once off vs ongoing process

CUSTOMISE: Comparing and Understanding Tailoring Methods for Implementation Strategies

To carry out research on the process and impact of tailoring strategies to improve the implementation of evidence-based interventions prioritised by health service partners

To build researcher and practitioner capacity in implementation science through training, mentorship and networking
A popular but “poorly developed”* concept

There are an increasing number of examples of tailoring in the literature, elucidating the various steps to identify determinants of implementation and select strategies

But varying descriptions and approaches:
• Proactively customizing the method of implementation
• Personalisation to fit with different population subgroups
• Adaptations during delivery

*Wright J. Tailoring Stroke Best Practice Recommendations to the Care Home Context: Identifying a Balance Between Theory and Real-World Practice. 2019; Dissertation (unpublished)
Sources of variation

- Timing
- Stages
- Level
- Method


Programme of Work (2020-2025)

Evidence synthesis

Tailoring strategies with clinical partners

Multiple Case Study of Tailoring Process

Capacity Building
• Recruit implementation researchers
• Deliver IS training programme
• Build collaboration across disciplines and centres
• Develop an implementation research network
Irish Implementation Science Training Institute

NOW ACCEPTING APPLICATIONS

Spring/Summer 2022

- Introductory and advanced topics in implementation science (IS)
- Small group sessions and project feedback from international experts
- Networking and mentoring opportunities

Confirmed speakers and workshop leaders

Blended format
5 asynchronous online modules from March '22

In-person workshop
5–7 July '22
at University College Cork

Course fee: €650
(€350 for PhD students)

Closing date 7th January 2022 (12 noon GMT)
To apply, visit the [UCC CPD centre website](#)
Acknowledgements

Sheena McHugh, s.mchugh@ucc.ie
https://www.ucc.ie/en/implementation-research/