The role of ‘mindlines’ in research implementation

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Who we are
Our work is informed by:

- Implementation theories
- Knowledge management
- Diffusion theories
- Innovation theories
- Communities of practice
- Decision making
- Organisational behaviour
- Organisational sensemaking

- Social psychology
- Narrative theory
- Education theory
- Epistemology
- Social constructivism
- Actor network theory
- Structuration theory
- Social theories etc..
Our methods

- Ethnographic
- Case study
- Action research
- Iterative / participative
- Developmental
- Relational
Our research (2000-2019) that we’re drawing upon

- CoPs: ‘Haymarket’ and Outpatients, NHS R&D 2000-2
- ‘Lawndale’, NHS R&D 2001-8
- Perceptions of Depression, MRC 2002-4
- Treatment Centres, NIHR (SDO) 2003-6
- Skilled for improvement?, Health Foundation 2012-14
- Knowledge exchange among NHS commissioners, NIHR 2011-3
- DEEP (elderly social care), Joseph Rowntree Foundation 2014-15
- Able to Improve?, Health Foundation 2017-19
Four elements

The **context** (organisations)

The **evidence** (e.g. relevance)

The **change method** (management/facilitation)

The **target practitioners** (people)

Successful Implementation
Four elements

The **context**
(organisations)
Four elements

The **context** (organisations)

The **evidence** (e.g. relevance)
Sources of “evidence”

Networks

Patients

Textbooks

Benchmarks

Education (study days, teaching / mentoring)

Integrated care plans/ pathways

Newsletters/ cascades

Peers

Experts

Opinion leaders

Reflection

Journals

Audit / complaint reviews

Professional meetings

National / local policy

National / local guidelines

Conferences / workshops

Websites

Stories and case studies

Systematic reviews

Local protocols

Own experience

Reps - drug/ devices

Own experience

Reps - drug/ devices
Four elements

- **The context** (organisations)
- **The evidence** (e.g. relevance)
- **The target practitioners** (people)
- **The change method** (management/facilitation)
There has been a plethora of approaches to implementing research

- Education
- CPD
- Clinical audit
- Leadership
- Champions / opinion leaders
- Evidence-based practice
- Clinical audit
- Change management
- QI techniques (e.g. PDSA)
- Diffusion
- Participatory techniques
- Knowledge brokers
- Directives e.g. NICE
- Models and frameworks (e.g. PARiHS, KTA)

And yet... still only patchy success.
Levels for understanding how evidence is used

1. EBP / Centre
   - Identify a client-centred problem
   - Frame a focused question
   - Search thoroughly for research derived evidence
   - Appraise the evidence for its validity & relevance
   - Seek and incorporate users' views
   - Use the evidence to help solve the problem
   - Evaluate effectiveness against planned criteria

2. Local policy
   - 3 Practitioners
   - 4 Patients
Level 1: (e.g. the “Evidence-based ...” movement)

1. Identify a client-centred problem
2. Frame a focused question
3. Search thoroughly for research derived evidence
4. Appraise the evidence for its validity & relevance
5. Seek and incorporate users’ views
6. Use the evidence to help solve the problem
7. Evaluate effectiveness against planned criteria
What the groups did with new evidence
The story so far:

1. EBP/ Centre
2. Local policy
3. Practitioners
4. Pt

- Identify a client-centred problem
- Frame a focused question
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Ethnography of primary care that set out (started in 2001) to explore the way primary care practitioners actually use knowledge in day-to-day practice...

Finished in 2008...

More supplementary work afterwards (e.g. observing students learn)
Design and methods

- Practice: “Lawndale”
  - 8-partner GP practice plus 3 nurses and others
  - leading-edge practice
  - small UK rural seaside town

- Ethnography:
  - 2 years surgeries, clinics etc;
  - nearly 8 years formal/ informal practice meetings
  - observation (participant/ non-participant)
  - interviews
    - open/ semi-structured
    - individual/ group/ multi-professional
    - informal discussions / chats

- Brief “check” ethnography in an urban practice (In Year 2)
- Thematic analysis
- Subsequent supplementary studies of student and hospital learning
## Multiple roles of GPs, e.g.:

<table>
<thead>
<tr>
<th>clinical domain</th>
<th>managerial domain</th>
<th>public health domain</th>
<th>professional domain</th>
</tr>
</thead>
<tbody>
<tr>
<td>diagnosing</td>
<td>managing resources, personnel and logistics</td>
<td>disease prevention</td>
<td>keeping up to date</td>
</tr>
<tr>
<td>prescribing</td>
<td>monitoring and improving quality</td>
<td>screening</td>
<td>reviewing practice</td>
</tr>
<tr>
<td>investigating</td>
<td>developing the IT system</td>
<td>health promotion</td>
<td>teaching and training</td>
</tr>
<tr>
<td>advising and explaining</td>
<td>complying with contractual and legal requirements</td>
<td>health education</td>
<td>nurturing collegial networks</td>
</tr>
<tr>
<td>referring</td>
<td>handling the Primary Care Trust</td>
<td>disease surveillance</td>
<td>promoting general practice (e.g. 'union' work)</td>
</tr>
<tr>
<td>advocating</td>
<td>training practice staff</td>
<td>knowing the local district</td>
<td>sustaining credibility</td>
</tr>
</tbody>
</table>
Mindlines

– Internalised collectively reinforced, partly tacit, guidelines-in-the-head that clinicians use to guide their practice

– One person’s mental embodiment of their knowledge-in-practice-in-context (K-i-P-i-C)

– Flexible, malleable, practical, contextual

– Pattern recognition: broader than heuristics/illness scripts/ rules of thumb

– Efficient and elegant thinking for complex problems
What’s in a mindline?

local norms/ routines

role models’ behaviour

institutional culture

peer values

guidelines

embedded science

rules of thumb

heuristics

illness scripts

tacit experiential knowledge

practical skills

soft skills

technical skills
Mindlines: sources of “evidence”

Gabbay & le May, *BMJ* 2004;329:1013
The transformation of many sources & types of evidence
Ethnographic findings

- Not just clinical but **multiple simultaneous roles**
- Not simply guidelines, but **mindlines**
- Not just knowledge but **knowledge-in-practice-in-context**
- Not just expertise but **contextual adroitness**
The story so far:

1 EBP/ Centre

2 Local policy

3 Practitioners

4 Pt

- Identify a client-centred problem
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Towards collective mindlines

Mindlines are linked socially and organisationally to other people’s mindlines

“Social life” of knowledge

(cf Brown & Duguid 2000)
Communities of Practice

"... groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their understanding and knowledge of this area by interacting on an ongoing basis. ..."

These people don't necessarily work together on a day-to-day basis, but they get together because they find value in their interactions. As they spend time together, they typically share information, insight, and advice. They solve problems. They help each other.”

Wenger, McDermott and Snyder (2001: 4/5)
Communities of practice are useful:

• in getting people together to develop best practice, implement or re-shape knowledge
• in promoting learning by developing and sharing collective mindlines
• as mechanisms for problem solving
• as mechanisms for speedily moving knowledge and innovation into practice
• in giving members ownership of the changes that are being made to practice

..but also unhelpful:

• by *blocking* the spread of knowledge beyond the boundaries of that community of practice
• by perpetuating *bad* practice as well as good, especially if the community has no mechanism for appraising the shared ideas

Lawndale Communities of Practice

- GPs’ coffee room
- Practice meetings
- Subgroups (e.g. treatment room; diabetes group)
- Local networks e.g. dining club
- Regional and national networks

All continually introducing, transforming and integrating new knowledge
Each actor transforms the knowledge
The story so far:

client/patient???

1 EBP/ Centre

2 Local policy

3 Practitioners

4 Pt

- Identify a client-centred problem
- Frame a focused question
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Formal view

Collective (CoP) view

Mindline

‘negotiated’ single instance

We’d like to start this new treatment.

I’ve heard about this treatment. Will it work for me?

Portrayal by media, adverts, etc

Client’s concepts

Client’s community’s concepts

Client’s concepts

Portrayal by media, adverts, etc
Antidepressants work best

Biochemical imbalance

Moral weakness

Social

Biological

Counselling works best

Johnson, Kumar, ... Gabbay et al BJGP 2007
The story so far:

1. **EBP/ Centre**
   - Identify a client-centred problem
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2. **Local policy**

3. **Clinician**

4. **Pt**
Developing the skills for evidence-based innovation

The Improvement Pyramid

Gabbay, le May et al. The Health Foundation 2014; BMJ QSHC 2017
Clinical and managerial skills
Developing Evidence-Enriched Practice in social care for the elderly (DEEP)

Andrews, Gabbay, le May, et al.
Joseph Rowntree Foundation 2015

• Gabbay J, le May AC. Evidence based guidelines or collectively constructed "mindlines"? Ethnographic study of knowledge management in primary care. *BMJ* 2004;329:1013-16 https://www.bmj.com/content/329/7473/1013


• Gabbay J, le May A. Mindlines: making sense of evidence in practice *BJGP* 2016 66 402-3 https://bjgp.org/content/66/649/402

