Minimally Disruptive Medicine
10 years later

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We need minimally disruptive medicine

The burden of treatment for many people with complex, chronic, comorbidities reduces their capacity to collaborate in their care. Carl May, Victor Montori, and Frances Mair argue that to be effective, care must be less disruptive.

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Minimally disruptive medicine

➢ Healthcare that is effective yet realistic
➢ Consideration of treatment burden and patient capacity
➢ Patient centred
➢ Individualised care

Non-compliance is not illustration of inadequate prioritisation by patients, but a symptom of the way in which healthcare services are configured
4 principles to guide health services and research:

1. Establish the weight of burden
2. Encourage coordination in clinical practice
3. Acknowledge comorbidity in clinical evidence
4. Prioritise from the patient perspective
Over the next decade, three middle range theories and one conceptual model added depth to the key concepts of MDM.

- Normalisation Process Theory
- Burden of Treatment Theory
- Theory of Patient Capacity
- Cumulative Complexity Model
Normalisation Process Theory (NPT) - HEALTHCARE WORKLOAD

Coherence

Collective action

Cognitive participation

Reflexive monitoring

Figure credit: Bhautesh D Jani
• Treatment burden is **subjective**
• Two people with the same workload will feel burdened differently
• **Workload** and **capacity** are a balancing act

• Both constantly changing

• If workload exceeds capacity, then patients feel **overburdened** and may become incapable of carrying out all required tasks in their life
Cumulative Complexity Model

**Patient workload** of demands
*Examples:
Job, Family, Self-care, Testing, Scheduling/attending appointments, Transportation, Paperwork

*Attributes of workload demands:
Number, Difficulty, Fit

**Access, Utilization, Self-care**

**Burden of treatment** $(g)$

**Patient capacity**
*Examples:
Physical/mental functioning, Pain, Symptoms, Fatigue, Finances, Literacy, Social support

*Attributes of capacity factors:
Amount, Controllability, Extensiveness

**Burden of illness** $(h)$

**Outcomes**

$\text{Access, Utilization, Self-care}$ $\xrightarrow{a}$ $\text{Patient workload}$ $\xrightarrow{b}$ $\text{Access, Utilization, Self-care}$ $\xrightarrow{c}$ $\text{Patient capacity}$ $\xrightarrow{d}$ $\text{Access, Utilization, Self-care}$ $\xrightarrow{e}$ $\text{Outcomes}$ $\xrightarrow{f}$ $\text{Outcomes}$ $\xrightarrow{g}$ $\text{Burden of treatment}$ $\xrightarrow{h}$ $\text{Burden of illness}$
Overwhelming treatment burden → Poor adherence → Worse health outcomes

Escalated treatments from health care providers
Burden of Treatment Theory

1. Mobilizing Capacity
   - Agency (General Potential)
   - Control over services (Structures Agency)
   - Social Skill (Securing co-operation)

2. Expressing Capacity
   - Functional Performance (Potential to do the work)
   - Structural Resilience (Potential to absorb adversity)
   - Social Capital (Informational and material resources)

3. Mobilizing for delegated tasks
   - Sense-making (Conceptualizing expected work)
   - Building and maintaining relational networks (Cognitive participation)
   - Monitoring (Appraising performed work)

4. Enacting delegated tasks
   - Enacting Delegated work (Collective Action)
   - Practical help (Skill-set workability)
   - Confidence in outcomes (Relational integration)

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Workload drivers (NPT)

Capacity

Unsupported workload

As patient continues to feel unwell, capacity is further reduced from symptoms and frustration

Treatment Burden increases (BoTT)

+ Treatment burden

Traditional healthcare response: increase treatment, monitoring, appointments

Reduced:
- Healthcare access/use
- Self-care

Worsening:
- Health outcomes
- Quality of life

+ Illness burden

Patient is unable to enact original workload or new intensified treatment; continues to feel worse

Capacity Drivers (TPC)

Figure 1: MDM Conceptual and Theoretical Summary

Key
- NPT = Normalization Process Theory
- TPC = Theory of Patient Capacity
- BoTT = Burden of Treatment Theory
To progress MDM, we need:

1. Ways of measuring treatment burden / patient capacity
2. Trials of complex interventions that target these aspects of care
<table>
<thead>
<tr>
<th>Measure</th>
<th>Length</th>
<th>Available Languages</th>
<th>Cutoffs for Clinical Action</th>
<th>Responsiveness to Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment Burden Questionnaire (TBQ)</td>
<td>15-items</td>
<td>English, French, Spanish</td>
<td>Score of 59 out of 150 indicates is likely unsustainable over time</td>
<td>Not explored but has detected changes in treatment burden after chronic illness intervention in one RCT</td>
</tr>
<tr>
<td>Patient Experience with Treatment and Self-management (PETS) questionnaire</td>
<td>60-item version or 34-item version, both divided into sub-scales</td>
<td>English</td>
<td>Not yet established</td>
<td>Demonstrated; increased treatment burden scores over time correlated with declines in patient self-efficacy, global mental health, and global physical health</td>
</tr>
<tr>
<td>Multimorbidity Treatment Burden Questionnaire (MTBQ)</td>
<td>10-items with 3 optional items related to cost of care and access to services for US context</td>
<td>English, Chinese</td>
<td>Not yet established</td>
<td>Not yet established</td>
</tr>
</tbody>
</table>

(MDM) Interventions must:

- Place the patient and their family at the centre
- Provide individualised care
- Acknowledge multimorbidity
- Minimize treatment workload
- Maximize patient capacity


In summary

• MDM conceptualization has evolved over the past 10 years

• Methods of treatment burden measurement are being validated

• Measures of patient capacity are needed

• Development and testing of interventions is required
Thank you for listening