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Dean's Grand Rounds · Royal College of Psychiatrists · 16 April 2026

OCD: A Silent Global Epidemic - Introduction

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Complex OCD & BDD Research & Neuromodulation Pathway Development

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1.5 CPD Points · Online via Zoom · 4:00 pm – 5:30 pm

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Session Roadmap

01

Prevalence Gap

The 1-in-50 paradox

02

Why 'Silent'

Shame, stigma, misdiagnosis

03

The Neurobiological Glitch

CSTC circuits & optogenetics

04

Treatment Limitations

The 10% ultra-refractory

05

Future Therapeutics

DBS, neuromodulation, pipeline

06

Call to Action

Breaking the 17-year silence

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The Prevalence Paradox: The 1-in-50 Gap

General Population

1 in 50

TRUE lifetime prevalence
(ECA / NCS-R, WHO studies)

GAP

Clinical Settings

1 in 135

Seen in primary &
secondary care settings

Millions of patients are simply 'missing' from the healthcare system — undiagnosed, untreated, deteriorating in silence.

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The 3,900% Explosion

Pre-1970s

1 in 20,000

OCD considered 'rare & untreatable'

1980

DSM-III

First standardised diagnostic criteria

1984–85

ECA Study

Prevalence recognised: 1 in 50 (Robins et al.)

Today

2–3%

Yet clinical detection remains ~0.75%

+3,900%

Increase in recognised prevalence between 1970 and 1985.

The disease did not increase. Our recognition did — yet 'silence' persists because our clinical systems never caught up.

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The Ego-Dystonic Barrier

Harm obsessions
Intrusive thoughts of harming loved ones — perceived as indicating true intent

Taboo sexual thoughts
Unwanted sexual thoughts about children, family — catastrophic shame spiral

Blasphemous thoughts
Religious intrusions — fear of being 'evil'; ostracism from community

'Pure O'
No visible compulsions — patients and clinicians both miss the diagnosis

Mental compulsions
Reassurance-seeking, neutralising — invisible to observer, exhausting to patient

17

YEARS

Patients hide symptoms not due to lack of distress, but because the content of obsessions is perceived as morally unacceptable — and because no one asks.

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The Trivialisation Trap

> ***I'm so OCD about keeping my desk tidy.***
>
> *— Heard in everyday conversation, on TV, in headlines. Every. Single. Day.*

Patients self-dismiss

Sufferers believe their symptoms are 'just a quirk' — seeking help feels disproportionate

Clinicians underestimate

Cultural normalisation lowers clinical index of suspicion in consultations

Policymakers deprioritise

If OCD is 'just neatness', it cannot be a public health emergency — funding follows perception

Research is defunded

OCD receives <1% of mental health research investment — trivialisation has systemic consequences

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Clinical Camouflage: Misdiagnosis

19% of OCD cases misdiagnosed as GAD or Depression at first presentation in primary care

GAD / Anxiety Disorder	**~47%**	Intrusive thoughts misread as generalised worry; reassurance-seeking indistinguishable from anxiety avoidance
Major Depressive Disorder	**~39%**	Secondary depression dominates; obsessional content never directly explored by clinician
Psychosis / Schizophrenia	**~18%**	Overvalued ideation mistaken for delusions; ego-dystonic nature not elicited
ADHD	**~12%**	Ritual behaviour and inattention create superficial overlap; different cognitive substrates
Autism Spectrum Disorder	**~17%**	Repetitive behaviours vs compulsions; frequently co-occurring - both must be assessed and treated

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Who Is Affected?

~280M	2–3%	10th	17 yrs
People affected worldwide	Lifetime prevalence	Cause of disability (WHO)	Average delay to treatment
WHO 2022	*ECA / NCS-R*	*GBD 2019*	*Hollander et al.*

Onset	Bimodal: peak childhood (age 10) + early adulthood (age 21); male-earlier
Paediatric	0.25–4% children/adolescents; frequently missed as anxiety or ODD
Perinatal	2–4% pregnancy/postpartum; commonest new-onset psychiatric disorder postpartum
Economic cost	~$1.4 trillion USD/year globally in lost productivity alone

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Mortal Silence: The Suicide Risk

1 in 7

patients attempt suicide

Torres et al., 2011 · Meier et al., 2016

10×

higher mortality rate vs. general population

Meier et al., 2016 · Fineberg et al., 2013

Why this is systematically missed:

- Suicidality attributed to comorbid depression — OCD aetiology not recognised
- Shame prevents disclosure of intrusive thoughts; clinician cannot screen for what they do not ask
- High-functioning façade maintained until catastrophic deterioration

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"Dangerous" OCD: Physical Sequelae

Untreated OCD causes permanent physical damage that is systematically missed in clinical encounters.

Contamination OCD

- Dermatitis & excoriation from chronic handwashing with bleach/chemicals
- Chemical burns - undiluted cleaning agents applied directly to skin
- Contact dermatitis → open wounds, secondary infection, scarring

Checking / Decontam.

- Severe dehydration → acute kidney injury / renal failure (documented cases)
- Malnutrition & electrolyte disturbance from contamination food fears
- Dental erosion from repetitive mouthwashing or vomiting compulsions

Hoarding

- Falls and injuries from accumulated clutter in living spaces
- Respiratory illness: dust, mould, vermin in hoarded environments
- Social isolation → cardiovascular and metabolic health deterioration

Avoidance / 'Pure O'

- Extreme withdrawal → loss of employment, relationships, deconditioning
- Inadequate medical care-seeking due to healthcare contamination fears
- Delayed serious illness diagnosis when medical avoidance is a compulsion

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Economic Invisibility: The £1 Million Patient

£

£1M+

Estimated lifetime cost of one severe, untreated OCD case

NHS 2014 Cost Analysis

NHS Direct Treatment	**~£84,000**
Hospitalisations, crisis care, outpatients over lifetime	
Benefits & Welfare	**~£310,000**
Disability benefits, carer allowance, housing across working life	
Lost Tax Revenue	**~£420,000**
Lost income tax & NI from inability to work (20-year working life)	
Social Care & Crisis	**~£190,000**
A&E, police, emergency housing, voluntary sector services	

The economic burden is massive — yet largely unmeasured by policymakers

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OCD: Myths vs Clinical Reality

COMMON MYTH	CLINICAL REALITY
OCD is just being 'neat and organised'	OCD is ego-dystonic: obsessions cause intense distress; compulsions are not pleasurable
OCD is an anxiety disorder	OCD has its own DSM-5/ICD-11 chapter; overlaps with tic disorders and OCSD spectrum
Patients can 'just stop' rituals	Compulsions are driven by neural circuit hyperactivity — not choice or character
OCD only involves checking or cleaning	Common subtypes: harm, sexual, religious, symmetry — many are completely invisible
OCD affects 'perfectionists'	Affects all personalities; onset from age 5; no socioeconomic or cultural boundary

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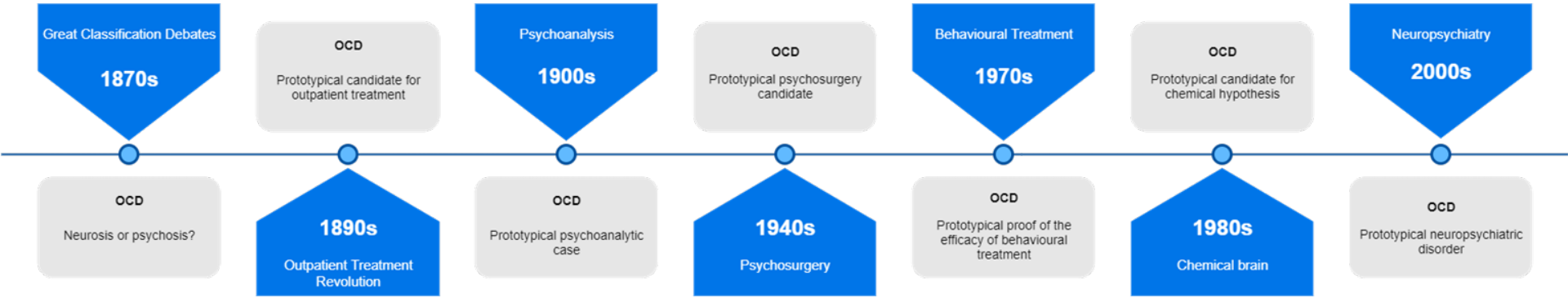
Obsessive Compulsive Disorder

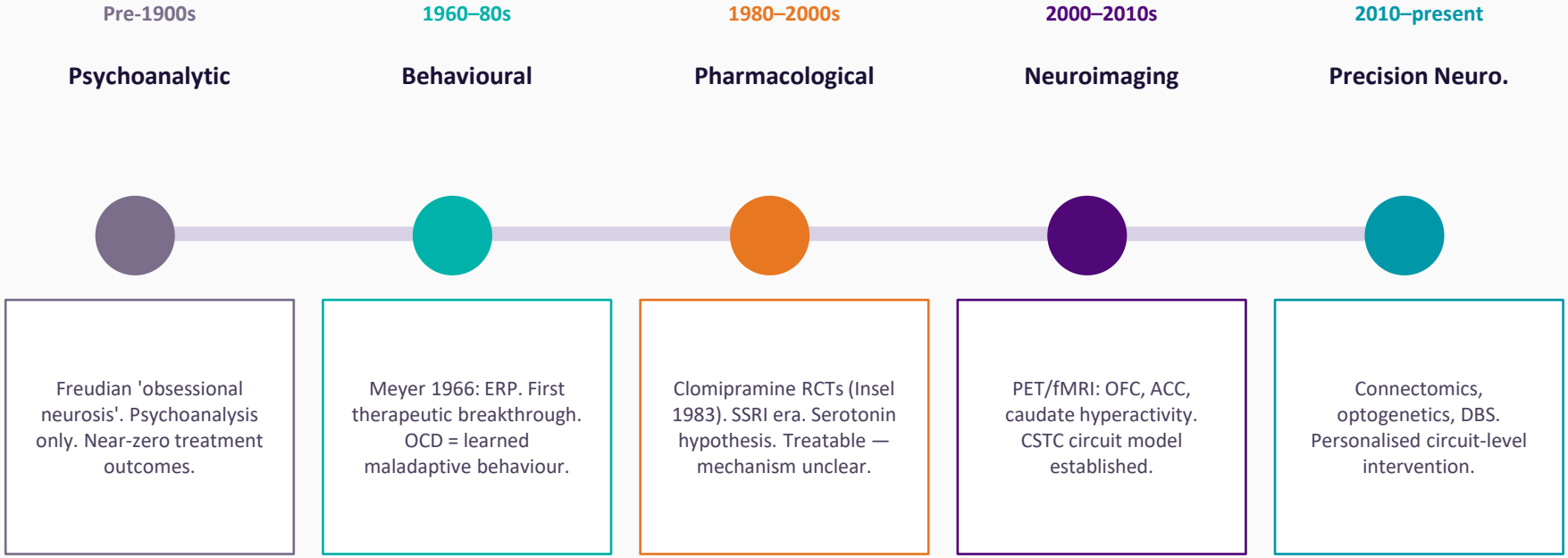
A Prototypical ___ Disorder



Fascinating co-evolution of psychiatry as a discipline and OCD as an illness

A Prototypical Neuropsychiatric Disorder

The evolution from psychoanalytic curiosity to circuit-based pathology



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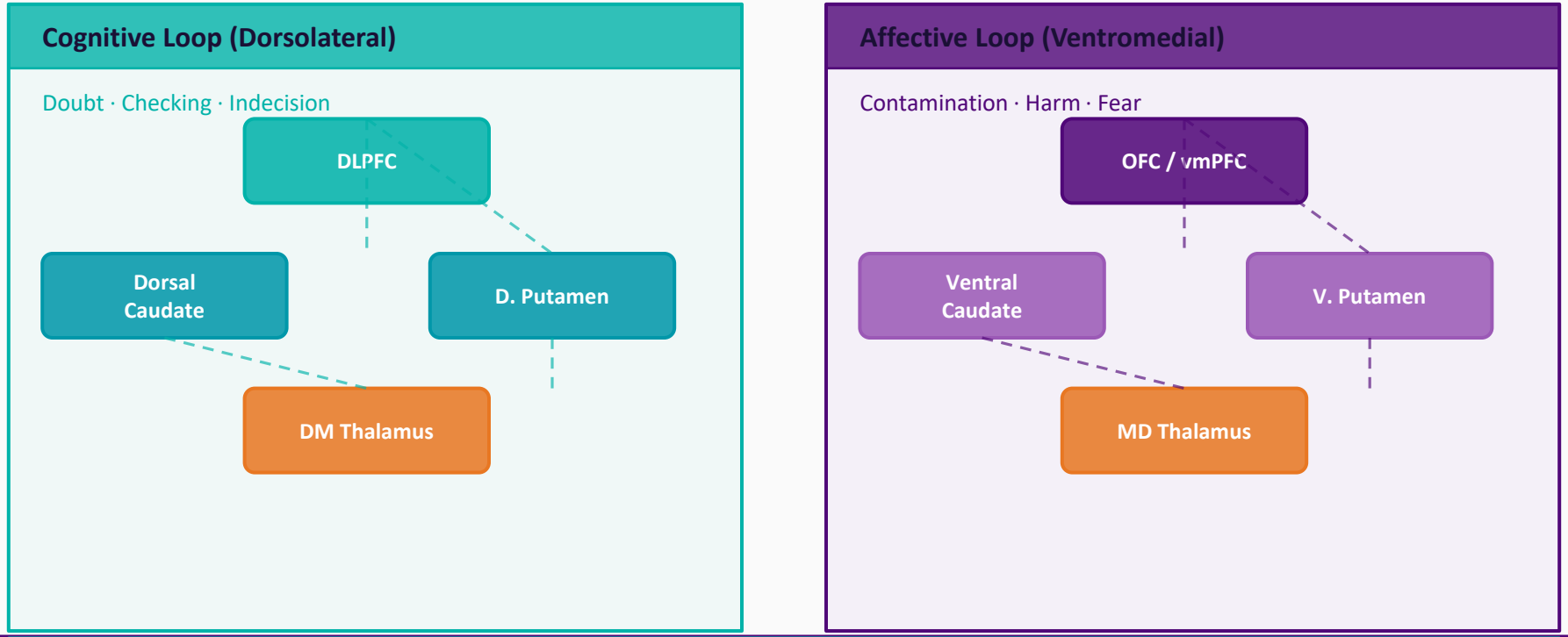
The CSTC Matrix: Two Pathological Loops



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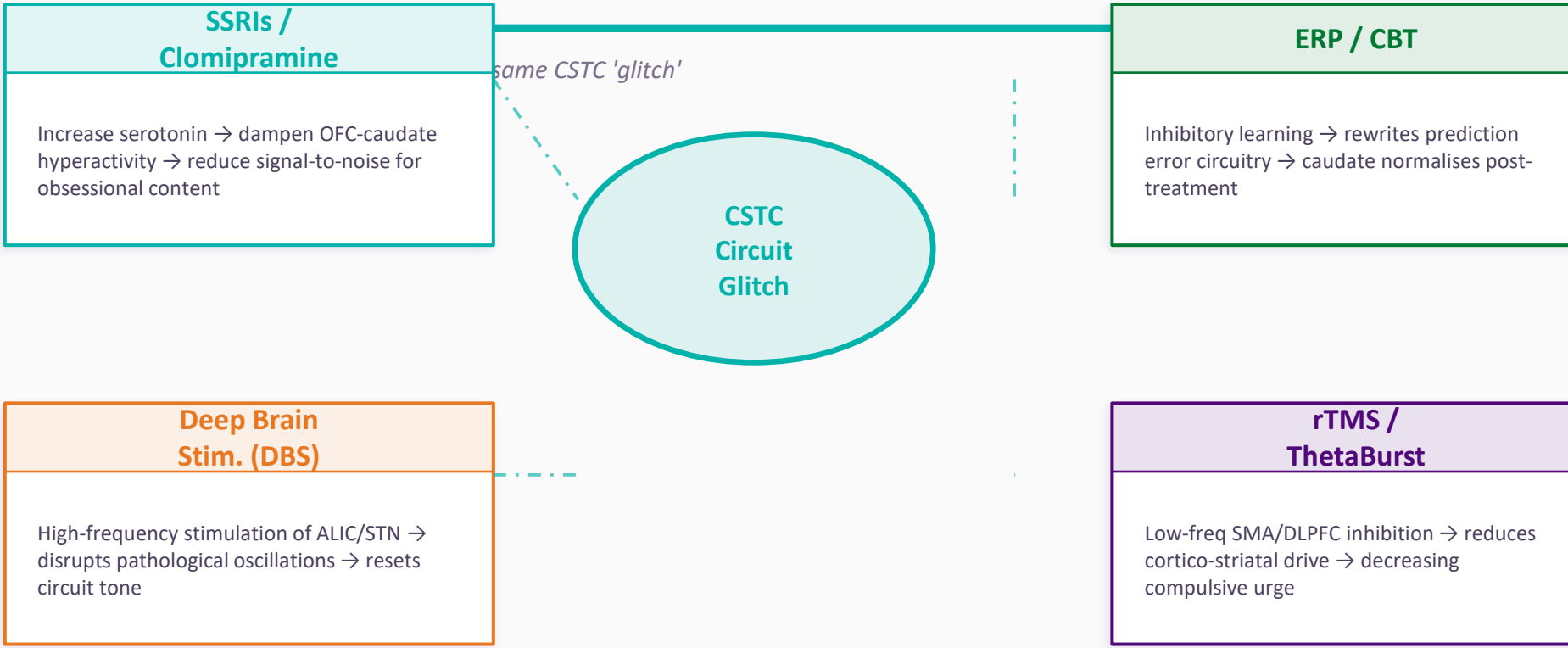
One Circuit, Many Interventions



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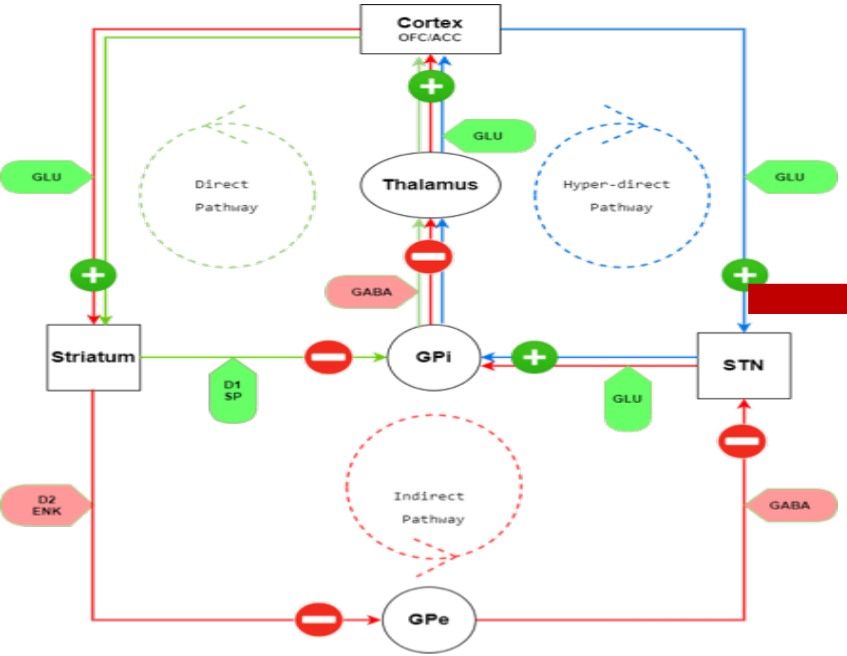


Every effective OCD intervention is based on modulating this circuit

- SRI/SSRI
- Dopamine augmentation of SRI
- Exposure based CBT
- Magnets
- ABI
- Brain stimulation treatments
- Lesioning

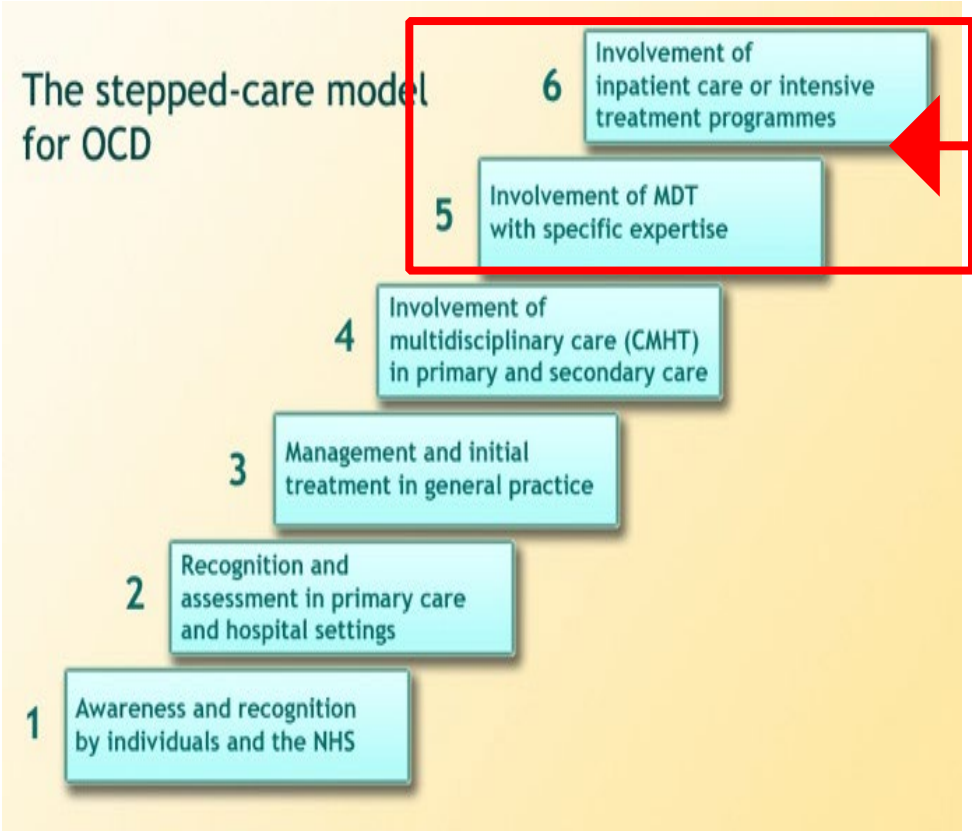
Broad aim: inhibition, not stimulation*.

NHS
National Institute for
Health and Clinical Excellence

Issue date: November 2005

Obsessive-compulsive disorder

Obsessive-compulsive disorder: core interventions in the treatment of obsessive-compulsive disorder and body dysmorphic disorder



Evidence-Based Treatments: What We Have

SRIs / SSRIs

First-Line Pharmacotherapy

- SSRIs: fluoxetine, sertraline, fluvoxamine, escitalopram, paroxetine
- Clomipramine: most efficacious SRI — tolerability limits use
- Higher doses than depression: fluoxetine 60–80 mg (NICE)
- Minimum trial: 10–12 weeks at therapeutic dose
- 40–60% meaningful response; ~25% full remission
- Augmentation: aripiprazole or risperidone for partial response

ERP / CBT

Gold Standard Psychological Therapy

- Exposure & Response Prevention: graded exposure + urge habituation
- Inhibitory learning model: new non-threat associations override OFC fear
- Response rates: 60–80% with intensive fidelity-delivered ERP
- 12–20 sessions; intensive residential format for severe OCD
- ICBT: comparable efficacy with substantially improved access
- Combination SRI + ERP superior to either alone

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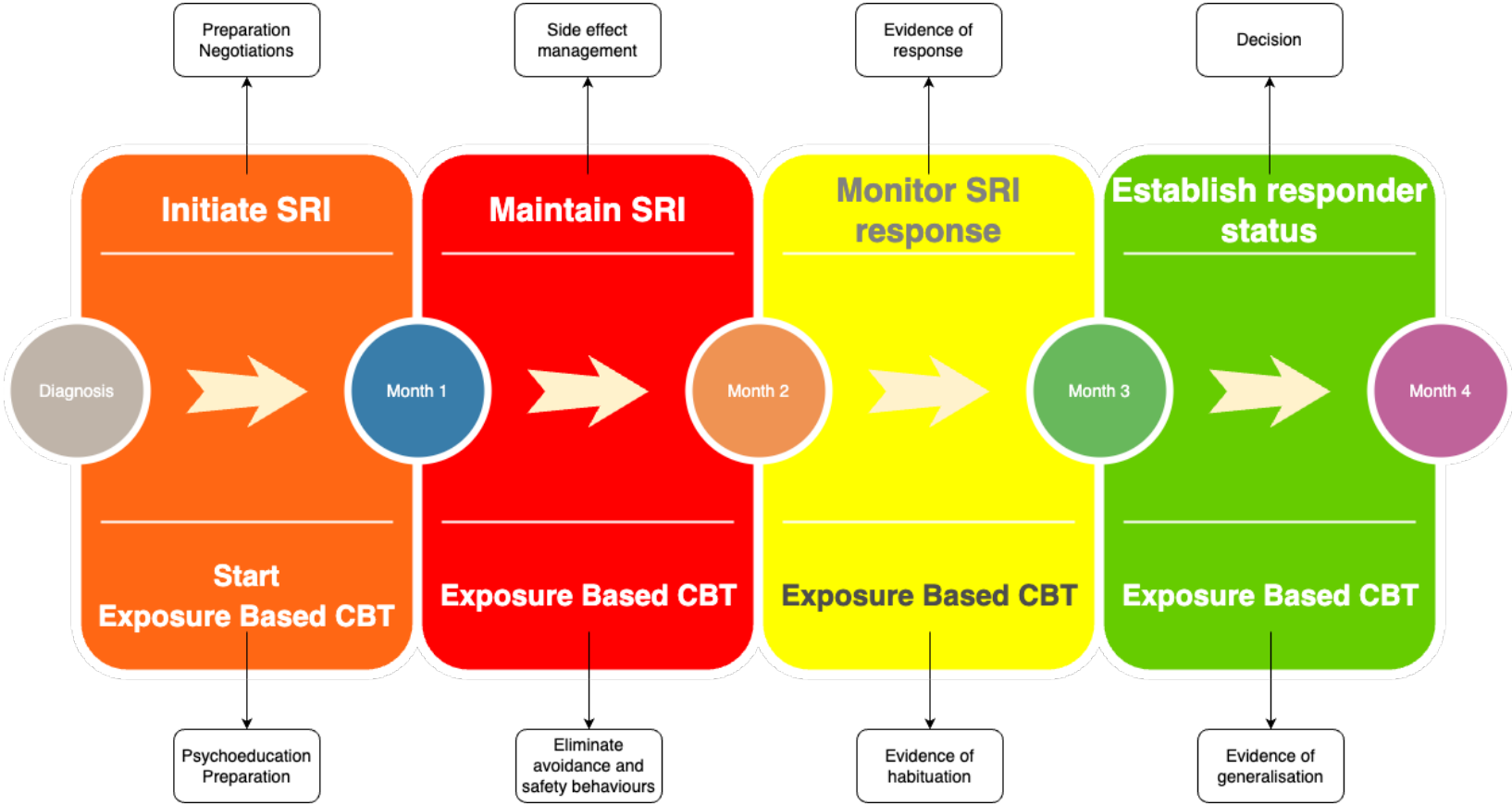
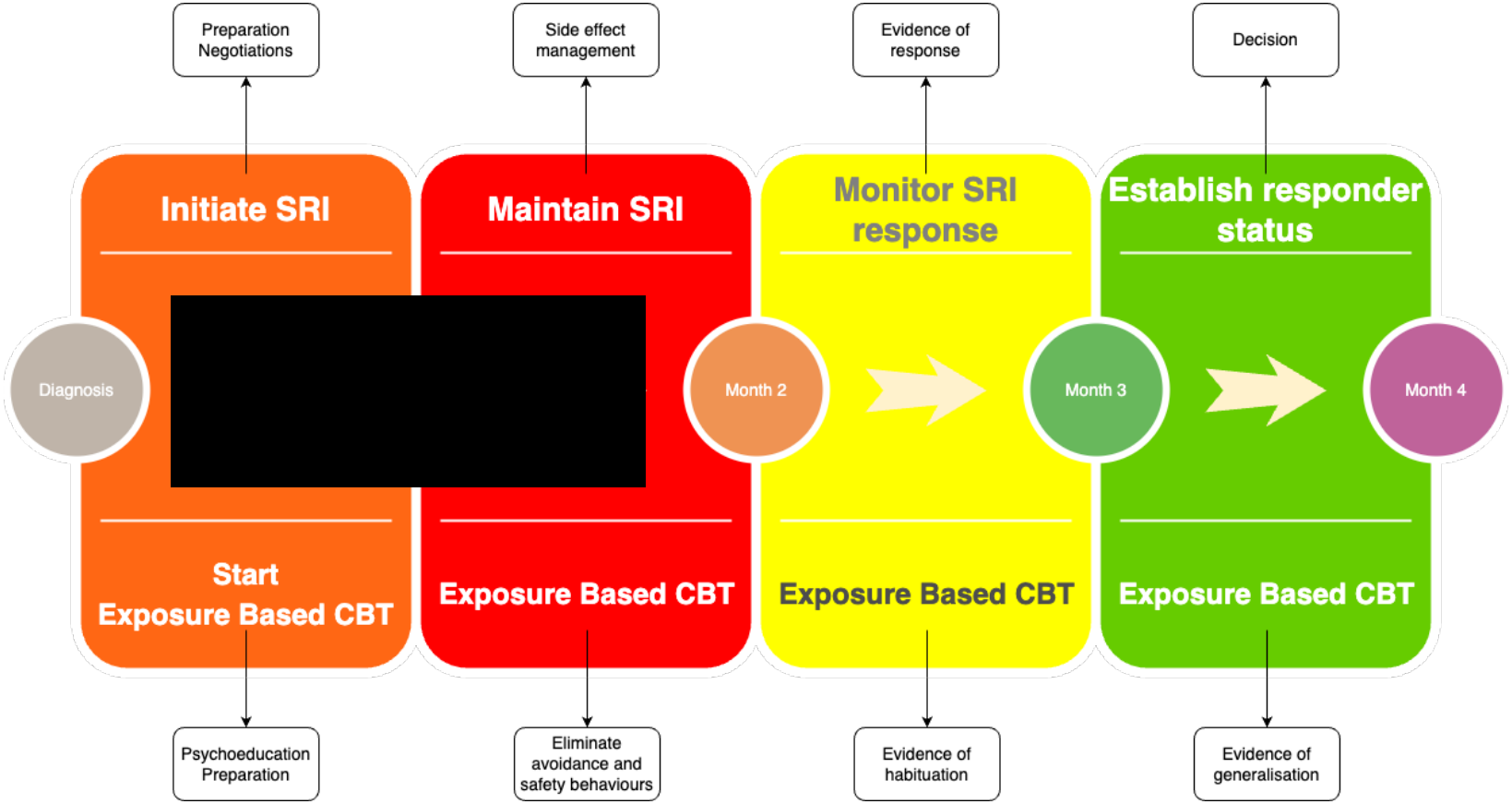

Preparation
Negotiations
Side effect
management
Evidence of
response
Decision
Initiate SRI
Maintain SRI
Monitor SRI
response
Establish responder
status
Diagnosis
Month 1
Month 2
Month 3
Month 4
Start
Exposure Based CBT
Exposure Based CBT
Exposure Based CBT
Exposure Based CBT
Psychoeducation
Preparation
Eliminate
avoidance and
safety behaviours
Evidence of
habituation
Evidence of
generalisation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Psychoeducation Preparation
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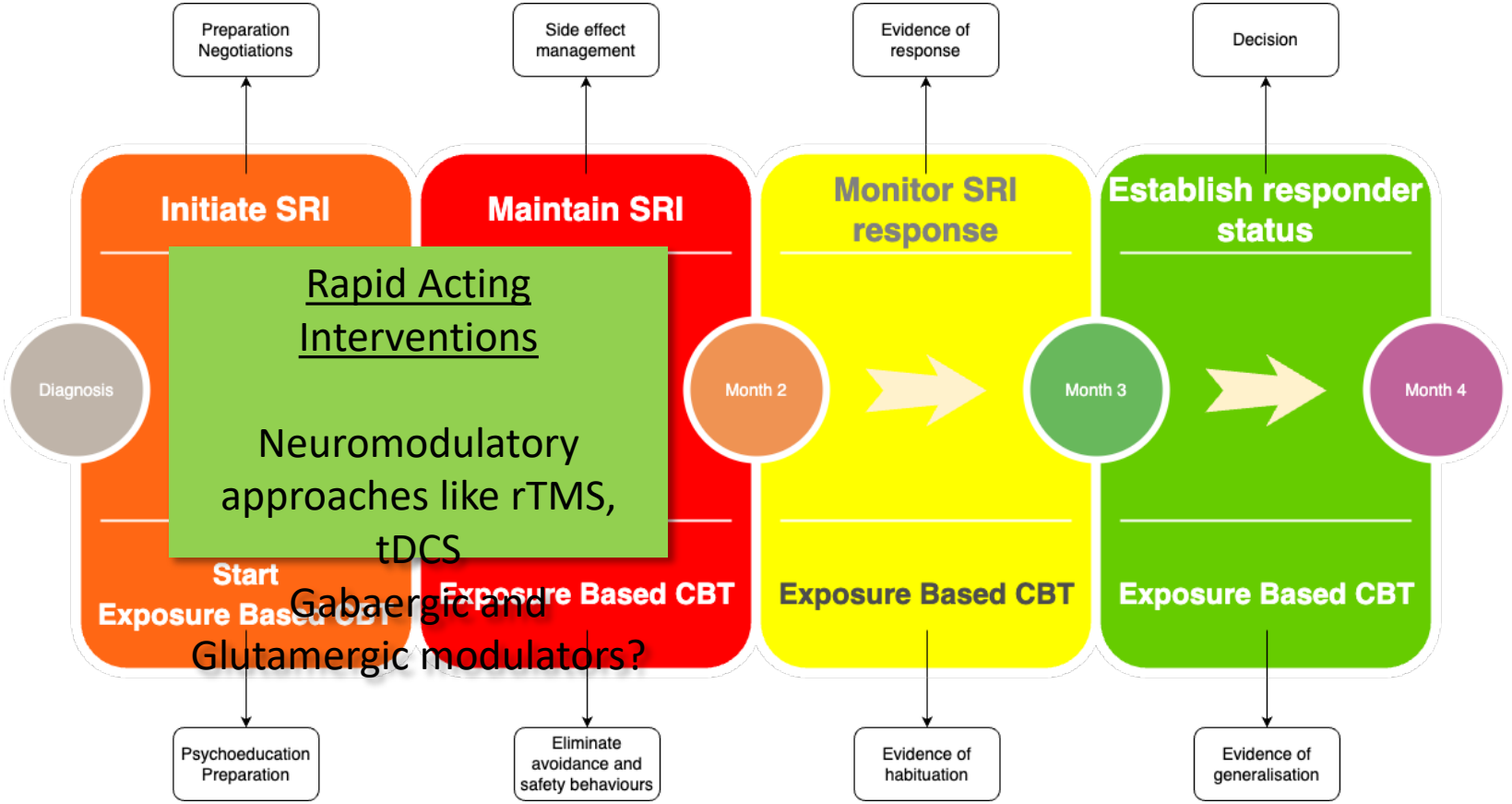
Evidence of habituation
Evidence of generalisation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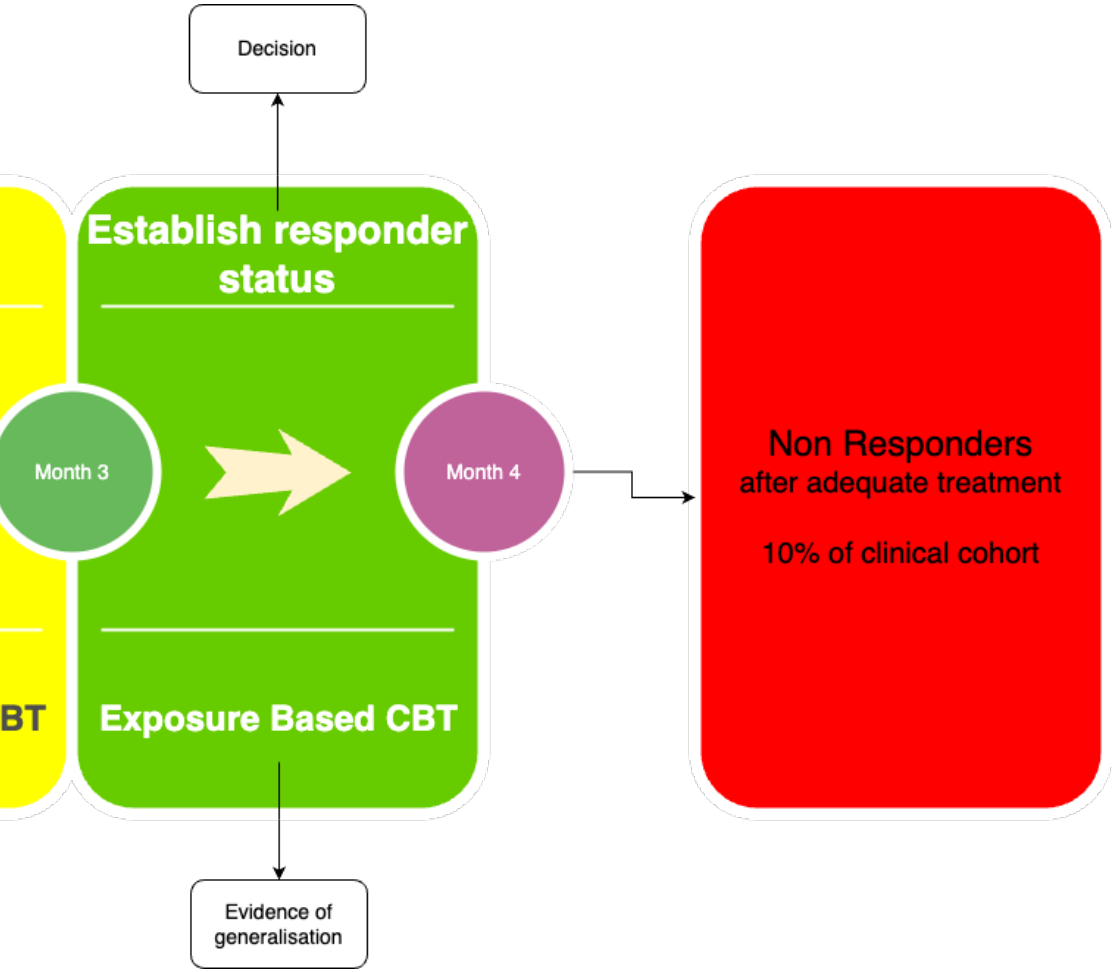
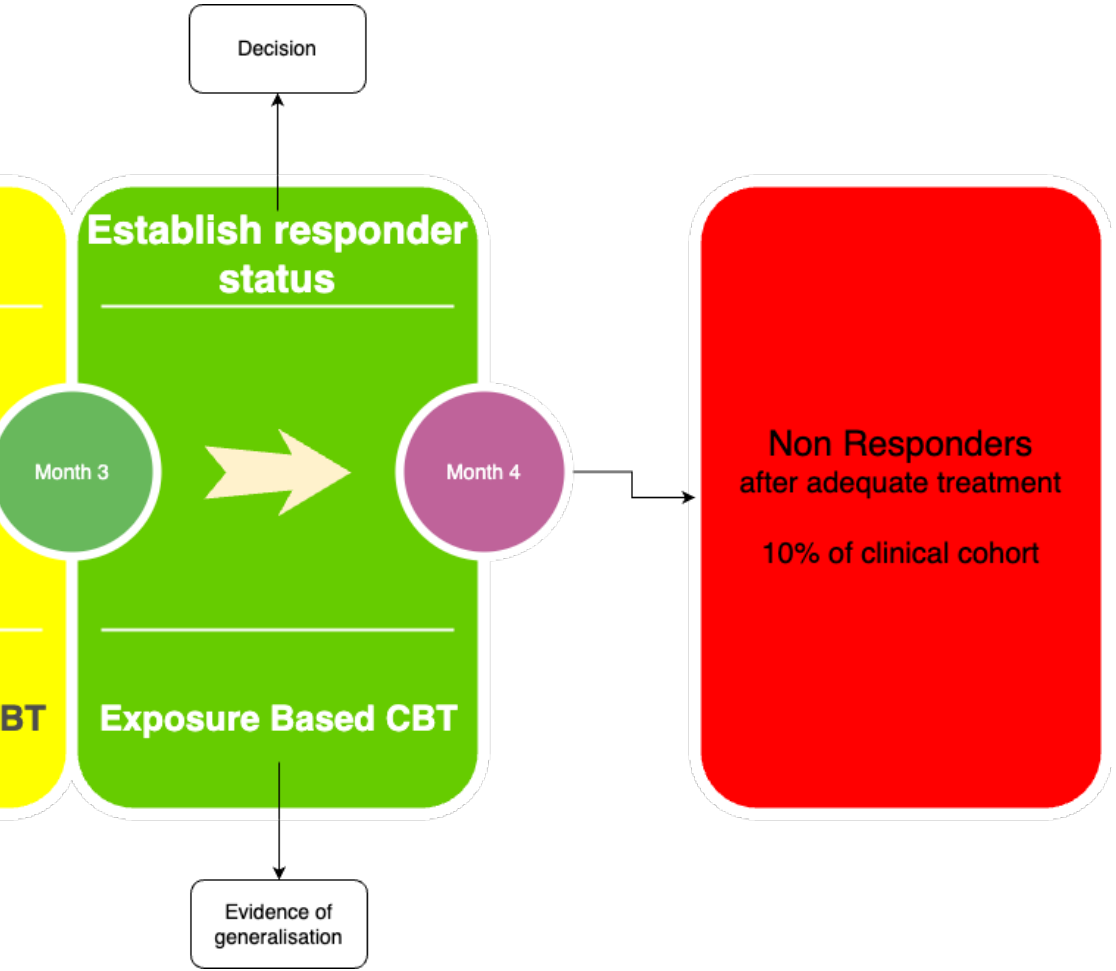
Psychoeducation Preparation
Eliminate avoidance and safety behaviours
Evidence of habituation
Evidence of generalisation
Rapid Acting Interventions
Neuromodulatory approaches like rTMS, tDCS
Gabaergic and Glutamergic modulators?


Decision
Establish responder status
Month 3
Month 4
Exposure Based CBT
Evidence of generalisation
Non Responders
after adequate treatment
10% of clinical cohort



Advanced treatments

- Deep Brain Stimulation
- Adaptive Deep Brain Stimulation
- Cingulotomy
- Capsulotomy
- Future approaches

The Solution-Refractory Problem

~40%

No response to first-line SRI

Fail to achieve clinically meaningful response after adequate SRI trial at optimal dose

~25%

SRI partial responders

Some improvement but persist with significant symptoms; require augmentation strategies

~10%

"Ultrapotent" non-responders

Fail ≥3 adequate SRI trials AND ERP — meet criteria for treatment-resistant OCD (TR-OCD)

<1%

Access advanced neuromodulation

Of those eligible for DBS or specialist neuromodulation, only a fraction access it globally

Defining Treatment-Resistant OCD:

Failure of adequate trials of ≥3 different SRIs (including clomipramine) at maximum tolerated dose for ≥12 weeks each, PLUS failure of therapist-delivered ERP. Approximately 10% of all OCD sufferers.

Treatment Limitations: The Unmet Need

<10%

ERP Access Crisis

receive evidence-based ERP; most CBT therapists lack OCD-specific training

25–30%

Dropout from ERP

dropout due to anxiety, shame, or poor fidelity of exposures

>60%

Paediatric Gap

child/adolescent OCD goes unrecognised in CAMHS

<5%

Perinatal Invisibility

of perinatal OCD is correctly identified at presentation

>85%

Global Inequity

LMIC patients have no specialist access whatsoever

<1%

Research Neglect

of total MH research funding allocated to OCD globally

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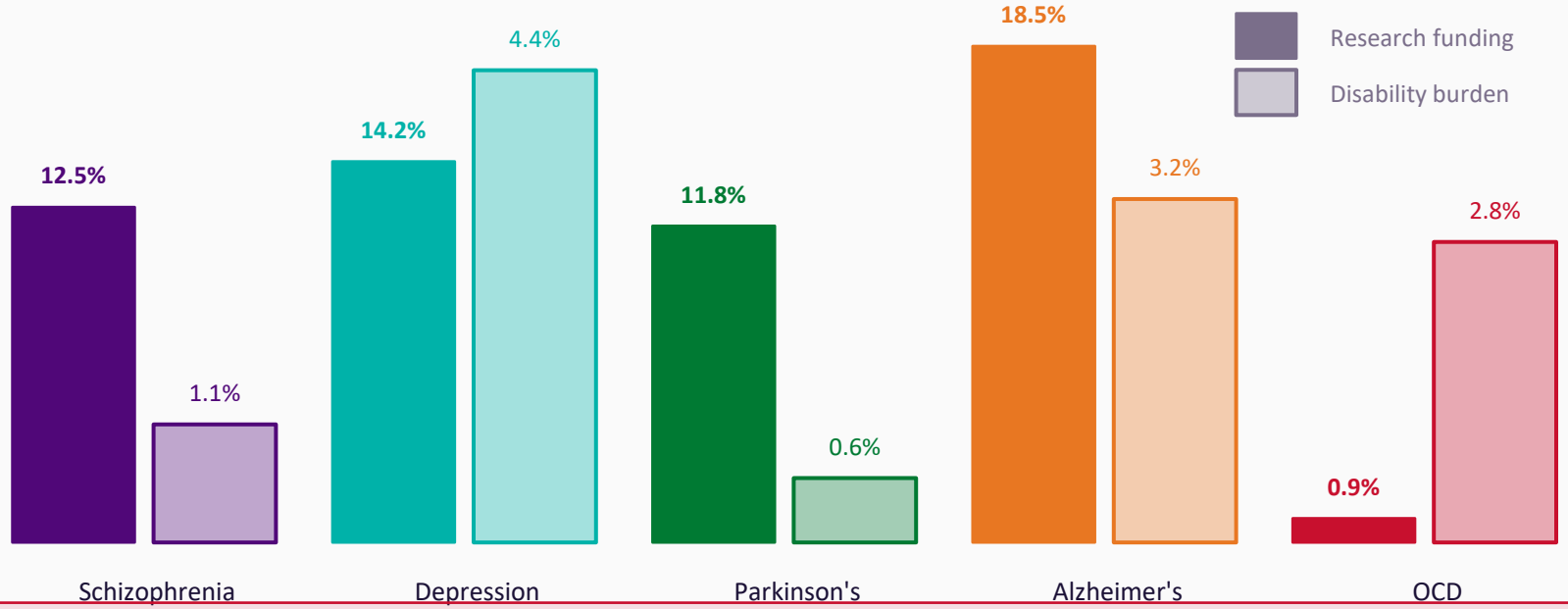
Structural Neglect: The Research Funding Gap

UK NIHR/MRC Mental Health Research Investment (%) vs Global Disability Burden (%)



OCD: 0.9% of funding, 2.8% of burden. Schizophrenia receives 14× more research investment. Structural neglect keeps the epidemic silent.

Beyond Chemistry: The Electrical Approach

40% of patients do not achieve adequate response with best pharmacological and psychological therapies. For this group, we need tools that act directly on the circuit — not indirectly through synaptic pharmacology.

Targeted

Stimulation delivered directly to specific CSTC nodes (ALIC, STN, NAc) — bypasses systemic off-target effects of drugs

Programmable

Stimulation parameters (frequency, amplitude, pulse width) adjusted non-invasively after implant based on biomarkers

Reversible

Device can be switched off or removed if adverse effects occur or remission achieved — unlike ablative capsulotomy

Biomarker-driven

Closed-loop DBS: neural biomarkers (beta oscillations, LFPs) trigger stimulation only when circuit dysfunction is detected

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Precision Targets: ALIC vs STN vs NAc

Matching stimulation site to symptom cluster — network-based targeting

ALIC / VC–VS

Symptom cluster:

Anxiety-dominant OCD: harm, contamination, checking

Mechanism:

Disrupts OFC-caudate & OFC-thalamic afferents; reduces threat appraisal

Key evidence:

Nuttin 1999; Greenberg 2010 HDE trial; ~50% ≥35% Y-BOCS reduction

vm-STN

Symptom cluster:

Compulsion-dominant: symmetry, 'just right', tics

Mechanism:

Modulates indirect pathway inhibition; reduces compulsive motor output

Key evidence:

Mallet et al., 2008 NEJM double-blind crossover; ~50% response

Nucleus Accumbens

Symptom cluster:

Anhedonic/avoidant OCD with severe depression

Mechanism:

Dopaminergic reward circuit modulation; dual OCD+MDD effect

Key evidence:

Denys et al., 2010; preferred where severe depression co-exists

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Emerging Translational Approaches

rTMS & ThetaBurst

SMA target (low-freq)
Multiple RCTs; reduces compulsive urge; non-invasive; outpatient

DLPFC protocol
Augments ERP cognitive reappraisal; combined neuromodulation+therapy

Intermittent TBS
5-min sessions; equivalent to 40-min rTMS; dramatically improves scalability

Glutamate Modulators

N-Acetylcysteine
Positive augmentation RCTs (Afshar et al.); well-tolerated; accessible

Riluzole
Glutamate release inhibitor; open-label series; ongoing Yale RCT

Ketamine IV
Rapid transient anti-OCD response; provides mechanistic translational window

Psychedelic-Assisted

Psilocybin (OCD RCT)
Moreno 2006; UCL/JHU RCT underway; 5HT2A serotonergic reset hypothesis

MDMA-assisted
Facilitates emotional processing; PTSD-comorbid OCD evaluation underway

D-cycloserine
NMDA partial agonist; timing-sensitive ERP augmentation; 3 positive RCTs

Immunotherapy & Novel

PANDAS/PANS: rapid reversal in autoimmune-mediated OCD (Perlmutter 1999)

Anti-inflammatory
Microglial PET: neuroinflammation in OCD; potential anti-inflammatory trials

Gut-brain axis
Preclinical microbiome disruption → OCD-like behaviour; human trials in design

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Rapid-Acting Interventions & The Pipeline

Ketamine & Glutamatergic Modulators

- IV ketamine (0.5 mg/kg): rapid (hours) anti-OCD response — open-label series (Rodriguez et al., 2013)
- Mechanism: NMDA blockade → disrupts glutamatergic CSTC hyperactivity → transient normalisation
- Duration: 1–2 weeks — insufficient standalone; opens mechanistic window
- Therapeutic window hypothesis: ketamine augments subsequent ERP by reducing compulsive drive
- Esketamine (nasal): approved for TRD; OCD-specific RCT evidence lacking
- NAC, riluzole: longer-lasting circuit stabilisation; fewer dissociative side effects

THERAPEUTIC PIPELINE

Preclinical	Gene therapy (OFC); microbiome; NMDA antagonists
Phase I	tDCS OFC; MDMA-assisted; 5-HT2A ligands
Phase II	Psilocybin RCT; riluzole RCT; ketamine + ERP
Phase III / HDE	ThetaBurst TMS; DCS + ERP; STN-DBS trial
Licensed / HDE	DBS (ALIC — FDA HDE); SSRIs; clomipramine; ERP

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Reframing OCD for the 21st Century

Niche anxiety disorder Classified under anxiety for decades; clinicians deprioritise	**Major neuropsychiatric disorder** Circuit-based pathology; equal to Parkinson's in biological complexity
'Difficult' patient group Treatment resistance framed as patient failure	**Precision medicine opportunity** Circuit biomarkers enabling personalised intervention selection
Psychological curiosity Freudian legacy; 'talk therapy'	**Translational neuroscience priority** Optogenetics, connectomics, DBS — a neuroscience research frontier
Policy footnote <1% of MH research funding; absent from WHO priority lists	**Global public health emergency** 280M affected; 10th disability cause; $1.4T economic burden

The science is ready. The gap is structural, political, and economic — not biological.

Breaking the 17-Year Silence

1	**Active Screening**	Embed OCD screening in ALL new GP, CMHT, IAPT, perinatal assessments. Ask directly. Use OCI-R or Y-BOCS. Do not wait for disclosure.
2	**Specialist Referral Pathways**	Nationally commissioned OCD specialist pathways (NHS England). Every region should have direct-access OCD clinic. Stop referring to generic CBT.
3	**Clinician Training**	Mandatory ERP competency in all CBT programmes. OCD-specific modules in undergraduate psychiatry and GP training. OCARD educational programme.
4	**Research Investment**	Increase NIHR/MRC OCD allocation to ≥3% (in line with disability burden). Fund psilocybin, TMS, immunotherapy RCTs. National OCD biobank.
5	**Policy Advocacy**	Name OCD as a national NHS priority (as gambling disorder was in 2022). Lived experience + specialist voices in NICE guideline refresh.

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The Framework for Change

1 Research Investment

- Fund OCD to burden parity (≥3% MH research)
- Biomarker & stratification trials
- National OCD genomic & imaging biobank

2 Clinical Training

- Mandatory ERP competency in all CBT programmes
- OCD modules in GP & psychiatry curricula
- Peer supervision networks nationally

3 Service Innovation

- NHS England national stepped-care OCD pathway
- Integrated ICBT + specialist escalation model
- Perinatal OCD screening in all antenatal settings

4 Advocacy & Destigmatisation

- Campaign against 'I'm so OCD' trivialisation
- Lived experience in guideline and research design
- OCD on NHS Long Term Plan as named priority

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OCD is not a niche.

OCD is not trivial.

OCD is a silent global epidemic —

and silence costs lives.

Key messages:

- The 1-in-50 paradox is a clinical failure, not an epidemiological artefact
- OCD is a neuropsychiatric disorder: the circuit is the target
- 1 in 7 attempt suicide - yet the risk is systematically misattributed
- DBS, TMS, Ablative neuromodulation: precision neuromodulation is the next frontier
- Structural change needed: funding, training, services, and policy advocacy

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