FO-10 The meaning response: placebo, ritual and expectation as medicine and as trap

HEALING after the FALL, research library, FO-10

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How to read this report

This report asks what expectation, ritual, attention and belief do to illness, by how much, and where they stop. In short, expectation and care change how illness is felt, not tumours, bacteria, bone or blood sugar. They can make a patient feel better while the disease advances, and that is how they kill. Fear and negative words work the same machinery in reverse.

Where only an abstract or a secondary summary was read, the reference says so. My own arithmetic and inferences are marked [VERIFY]. No plant remedy is named, because the subject is the context of healing. Where a protocol needs an inert vehicle it uses boiled water, sugar, salt or flour. For any herb carried inside a ritual, FO-03, MI-04, MI-10 and NU-08 govern identification and dose.

1. From placebo to meaning response

The anthropologist Daniel Moerman and the physician Wayne Jonas argued in 2002 that "placebo effect" is a misleading label (Moerman and Jonas 2002). An inert pill does nothing. What acts is the meaning attached to the pill, the healer, the setting and the act of treatment, which they called the meaning response. Moerman developed the argument at book length (Moerman 2002). The reframing moves attention from the pill to everything around it, where a village healer has most control.

In the placebo arms of duodenal ulcer trials, healing averaged 62.4 per cent in five German studies and 16.7 per cent in three Danish and Dutch studies (Moerman and Jonas 2002). Across 117 ulcer trials from 32 countries the mean placebo healing rate was 35.3 per cent, ranging from 0 to 100 per cent (Moerman 2000, secondary summary only). The warning sits inside the lesson. Healing was judged by endoscopy, yet the variation was huge, and a sceptical reviewer suggested that trial patients may simply have taken other medicines (cited in the same summary). Variation in placebo arms may be variation in diagnosis, natural healing, concealed treatment and measurement, not only in meaning.

When a patient improves after a dummy treatment, five things are mixed: the natural course of the illness, regression to the mean (patients come when they feel worst), reporting bias, concealed co-treatment and, last, a true effect of expectation, conditioning and care. Only the last is the meaning response proper. Kienle and Kiene re-examined the 15 trials behind Henry Beecher's 1955 claim that 35 per cent of 1,082 patients were relieved by placebo, and found no evidence of a placebo effect in any of them once spontaneous improvement, fluctuation, regression and additional treatment were considered (Kienle and Kiene 1997, abstract and secondary). The famous one-third measures how

often people get better for any reason. A healer who sees improvement after a ritual sees all five components at once and will credit the ritual for all of them. That is the trap in the title.

2. How large is the effect? The systematic reviews

Asbjørn Hróbjartsson and Peter Gøtzsche collected trials that randomised patients to placebo or to no treatment at all. In 2001, with 114 analysable trials, placebo had no significant effect on binary outcomes (relative risk 0.95, 0.88 to 1.02) and a small effect on continuous ones (standardised mean difference -0.28), concentrated in subjective outcomes and in pain (-0.27, about 6.5 mm on a 100 mm scale), and the effect shrank as trials grew larger (Hróbjartsson and Gøtzsche 2001). The 2022 Cochrane update covers 234 trials in 60 conditions, of which only 16 were at low risk of bias (Hróbjartsson and Gøtzsche 2022).

- Binary outcomes, 44 trials, 6,041 patients: relative risk 0.93 (0.88 to 0.99).
- Continuous outcomes, 158 trials, 10,525 patients: -0.23 (-0.28 to -0.17). Patient-reported -0.26, observer-reported -0.13.
- Pain -0.28, very variable. Four acupuncture trials by overlapping authors showed -0.68, three other pain trials -0.13, not significant.
- Nausea -0.25. Asthma -0.35 and phobia -0.63, both very uncertain.
- Larger effects went with physical placebos, patient-involved outcomes, small trials and trials designed to study placebo.

The authors concluded that placebo has no important clinical effect in general but can influence patient-reported outcomes, especially pain and nausea. Grade A.

Bruce Wampold and colleagues re-analysed selected disorders and called the placebo powerful (Wampold and others 2005, abstract only). Hróbjartsson and Gøtzsche replied that the pooled numbers were nearly identical (-0.28 against -0.29) and that the difference was "powerful spin" (Hróbjartsson and Gøtzsche rejoinder, abstract only, year [VERIFY]). Both sides agree that the effect lives mostly in subjective outcomes.

Jeremy Howick and colleagues used three-armed trials to ask whether placebo effects are smaller than treatment effects (Howick and others 2013). In 115 trials with continuous outcomes there was no significant difference. In 37 with binary outcomes, treatments clearly won (ratio 0.72). On "how bad do you feel" scales a good placebo often matches the treatments tested. On "did you get the outcome", real treatments win.

Karin Meissner and colleagues found that placebo groups shifted physical parameters such as blood pressure, airway function and gut motility a little (g = 0.34, and 0.22 against untreated controls) but not biochemical ones such as cholesterol, blood gases or hormones (g = 0.03, and -0.17 against untreated controls) (Meissner, Distel and Mitzdorf 2007). Grade B.

3. The neurobiology of expectation

In San Francisco, Jon Levine, Newton Gordon and Howard Fields gave naloxone, which blocks opioid receptors, to patients after wisdom-tooth extraction, and those who had responded to a placebo injection lost their relief (Levine, Gordon and Fields 1978, abstract). Placebo analgesia runs at least partly on the body's own opioids.

Fabrizio Benedetti's programme in Turin, summarised in Placebo Effects (Benedetti 2014, not read in full), adds three findings I could check in abstracts. Open treatment works better than the same drug given hidden: 10 mg of morphine given openly relieved post-operative pain faster than the same dose from a pump the patient did not know about, and hidden diazepam did nothing for anxiety (Colloca, Lopiano, Lanotte and Benedetti 2004). In Alzheimer's disease with poor frontal function, the expectation component of a local anaesthetic is lost, so higher doses are needed (Benedetti and others 2006, abstract and secondary review). And nocebo has its own chemistry:

proglumide, a cholecystokinin blocker, at 0.5 or 5 mg abolished pain increased by negative suggestion, while 0.05 mg did not (Benedetti 1997 and 2006, abstracts).

Ulrike Bingel and colleagues infused the opioid remifentanil at a constant rate into volunteers in heat pain (Bingel and others 2011, abstract). Told the drug was starting, their analgesia roughly doubled. Told it was stopping, while it still ran, the analgesia vanished. For a healer this may be the most useful single finding. The words spoken over a real drug can double or cancel it.

In Parkinson's disease, a placebo injection released dopamine in the damaged striatum, reducing raclopride binding by about 17 to 21 per cent, comparable to the real drug apomorphine (de la Fuente-Fernández and others 2001, abstract and secondary report). Belief moved the very system that the disease damages.

Conditioning works below belief. Pairing a distinctive drink with the immunosuppressant ciclosporin and later giving the drink alone suppressed interleukin-2 from T cells in healthy humans, after four re-exposures but not after one, and expectation alone did nothing (Goebel and others 2002, read only through a review). Grade B for existence, D for any village use.

These mechanisms act on pain, dopamine-dependent movement, nausea, mood and perhaps some immune signalling. None has been shown to act on bacteria, tumour cells, bone union or insulin secretion enough to change the outcome.

4. Which outcomes respond, and by how much

Effect sizes in the table mix standardised mean differences, response rates and percentage changes. Read across, not down.

Condition or outcome	Best estimate of the meaning or placebo effect	Source	Grade for "expectation helps"
Pain, general	SMD about -0.28 against no treatment, very variable, about 6.5 mm on a 100 mm scale in 2001 data	Hróbjartsson and Gøtzsche 2001, 2022	A (small)
Pain with positive expectation messages	SMD -0.43 (18 trials, mostly pain)	Howick and others 2018 (JRSM)	A (modest)
Nausea	SMD -0.25	Hróbjartsson and Gøtzsche 2022	A (small)
Irritable bowel	adequate relief 28 per cent no treatment, 44 per cent sham, 62 per cent sham with warm care	Kaptchuk and others 2008	A (large, one strong trial plus several smaller)
Irritable bowel, open label	adequate relief 59 against 35 per cent	Kaptchuk and others 2010	B (small trial)
Depression	placebo improvement 7.8 Hamilton points against 9.6 on drug (81 per cent of drug response)	Kirsch and others 2008	A for placebo-arm improvement, but includes natural course
Cancer-related fatigue, open label	29 per cent improvement in fatigue severity against usual care	Hoenemeyer and others 2018	B

Condition or outcome	Best estimate of the meaning or placebo effect	Source	Grade for "expectation helps"
Parkinson's motor symptoms	16 per cent of placebo patients met strict response criteria (range 0 to 55 per cent)	Goetz and others 2008	A for existence, B for size
Migraine attack	placebo labelled "placebo" reduced pain 14.5 per cent while untreated attacks worsened 15.4 per cent	Kam-Hansen and others 2014	B
Asthma, felt improvement	45 to 46 per cent improved on sham against 21 per cent on nothing, and 50 per cent on salbutamol	Wechsler and others 2011	A for feeling better
Asthma, lung function	FEV1 rose about 7 per cent on sham and on nothing, 20 per cent on salbutamol	Wechsler and others 2011	X for sham as treatment
Tumour size	2.7 per cent response in 375 placebo patients (2003), 1 per cent in 5,684 (2022)	Chvetzoff and Tannock 2003, later pooled analysis	X
Blood sugar, type 2 diabetes	HbA1c fall of 0.12 percentage points in placebo arms	meta-analysis of diabetes trials 2020	X for clinical use
Biochemical parameters generally	g = 0.03	Meissner and others 2007	X
Infection, fracture union	no trial found in which expectation changed bacterial clearance or bone union	none found	not graded, see text
Wound healing under stress	stressed caregivers took 48.7 days against 39.3 days to close a 3.5 mm biopsy wound (13 against 13 women)	Kiecolt-Glaser and others 1995	B for harm of chronic stress

Depression. In all 35 trials submitted to the United States Food and Drug Administration for four newer antidepressants (5,133 patients), drug groups improved 9.60 Hamilton points and placebo groups 7.80, a difference of 1.80, below the 3-point threshold used by NICE (Kirsch and others 2008). The gap became clinically significant only above a starting score of about 28, mainly because the placebo response weakened there. Much of the recovery in moderate depression, natural course included, is reachable with time, care and hope. Severe depression is not.

Parkinson's disease. Among 858 placebo patients in 11 trials, 16 per cent met strict response criteria, more often in surgical trials and where patients expected active treatment (Goetz and others 2008, abstract). In a sham-surgery transplant trial, patients who believed they had received the transplant reported better quality of life at 12 months whatever they had received (McRae and others 2004, abstract).

Migraine. Across 459 attacks in 66 patients, rizatriptan cut pain 47.6 per cent and placebo 20.7 per cent, and placebo labelled as the drug did about as well as the drug labelled as placebo (Kam-Hansen and others 2014, secondary reports, which give slightly differing figures).

Asthma. In a crossover trial (46 randomised, 39 completed), lung function rose 20 per cent with salbutamol (albuterol) and about 7 per cent with a placebo inhaler, sham acupuncture or nothing. Self-rated improvement was 50, 45, 46 and 21 per cent (Wechsler and others 2011). Patients felt as well on a dummy inhaler as on the real one while their airways stayed narrow. This is the trap in one trial.

Tumours. Tumour response on placebo was 10 of 375 patients, 2.7 per cent (Chvetzoff and Tannock 2003, abstract), and 1 per cent in a 2022 pooled analysis of 5,684 placebo patients (secondary report). The accompanying editorial put the ceiling for untreated response at about 10 per cent.

Blood sugar. Placebo arms in type 2 diabetes trials lowered HbA1c by 0.12 percentage points, 0.22 with injected and 0.09 with oral placebo (diabetes placebo meta-analysis 2020, abstract), against the 1 to 2 points that matter.

Infection and fracture. I found no trial in which expectation altered bacterial clearance or bone union. Pain from an infected wound or a fracture responds to care like any pain, so a patient may report less pain while pus collects or a bone sets crooked.

Wounds and stress. A standard 3.5 mm punch biopsy wound took 48.7 days to close in 13 women caring for a relative with dementia, against 39.3 days in 13 controls, about 24 per cent longer (Kiecolt-Glaser and others 1995, abstract and secondary). Not a placebo study, but a reason to treat fear and despair as clinical problems.

5. Honest placebos: the open-label trials

Ted Kaptchuk and colleagues at Harvard randomised 80 patients with irritable bowel syndrome to open-label placebo or to no treatment, with the same quality of contact (Kaptchuk and others 2010). The placebo group took two capsules of inert filler twice daily for three weeks, after being told in about 15 minutes that placebo effects are powerful, that the body can respond automatically as Pavlov's dogs did, that a positive attitude helps but is not required, and that taking the pills faithfully matters. At 21 days, 59 per cent reported adequate relief against 35 per cent, and symptom severity fell 46 points more than in controls. The authors called it a pilot. Their script also said the pills had been shown in rigorous testing to produce mind-body self-healing, which in 2010 overstated the evidence. A village script must not do the same.

The pooled estimates shrank as the evidence grew. Eleven trials with 654 participants gave a standardised mean difference of 0.72 (0.39 to 1.05), and 0.49 after excluding high-risk trials, with funnel-plot asymmetry noted in a later correction (von Wernsdorff and others 2021). Sixty trials with 4,554 participants gave 0.35 (0.26 to 0.44), with 0.39 for self-report and 0.09 (not significant) for objective outcomes, a prediction interval from -0.17 to 0.87, and only 2 trials at low risk of bias (Fendel and others 2025). Grade A for a small-to-moderate effect on self-report, X for objective outcomes.

Two trials matter here. In 74 cancer survivors, three weeks of open-label placebo improved fatigue severity by 29 per cent and fatigue-related quality of life by 39 per cent against usual care (Hoenemeyer and others 2018, abstract). After spine surgery, pairing an open placebo pill with each opioid dose cut opioid use by about 30 per cent in a pilot of 19 and 22 patients (Flowers and others 2021, secondary summary). Conditioned dose-sparing of scarce analgesics is Grade C, and must never be used where under-treatment is dangerous.

David Gorski objected that the 2010 trial measured nothing objective (Gorski 2010). Edzard Ernst flagged possible publication bias in the 2021 meta-analysis (Ernst 2021). Charlotte Blease, Luana Colloca and Kaptchuk argued that open placebos meet the American Medical Association's guidance because patients accept the remaining ambiguity about mechanism (Blease, Colloca and Kaptchuk 2016, abstract). A bioethics critic replied that they swap a lie about the pill for an equivocation about why it works (Columbia bioethics journal article, author not read).

6. The healer's manner, the setting and the ritual

The most useful trial for a healer is Kaptchuk's 2008 dose-escalation of meaning in 262 patients with irritable bowel syndrome in Boston (Kaptchuk and others 2008). One group waited. One had sham acupuncture with non-penetrating needles from a practitioner who spoke for under five minutes and did not converse. The third had the same needles after a 45-minute first visit with warmth, active listening, repetition of the patient's own words, empathy, questions about the illness, the patient's life and what they thought it meant, about 20 seconds of thoughtful silence while feeling the pulse, and confident expectation of benefit. Sessions were twice weekly. At three weeks adequate relief was 28, 44 and 62 per cent, and symptom severity fell 30, 42 and 82 points. The pattern held at six weeks (35, 53 and 61 per cent). The number needed to treat with the warm ritual against nothing is about 3 [VERIFY, my arithmetic]. Grade A.

Kenneth Thomas randomised 200 general-practice patients with symptoms but no signs to a positive or a non-committal consultation, with or without a tablet (Thomas 1987). The positive version gave a firm diagnosis and assurance of recovery in a few days. At two weeks 64 per cent were better against 39 per cent, while the tablet made no difference (53 against 50 per cent). The number needed to treat is about 4 [VERIFY, my arithmetic]. Thomas knew each patient's allocation, which may have shaped the results. Grade B.

Howick and colleagues pooled 28 trials (6,017 patients) of empathy and of positive messages in consultations. Empathy gave a standardised mean difference of -0.18 (7 trials), positive expectation messages -0.43 (18 trials, mostly pain), and the 11 trials that looked for harm found none (Howick and others 2018). Grade A for small-to-modest benefit.

The vehicle carries meaning too. In 835 English women, one-hour headache relief scored 1.78 on plain dummy tablets, 2.18 on branded dummies, 2.48 on plain aspirin and 2.70 on branded aspirin (Branthwaite and Cooper 1981, abstract and secondary). Moerman and Jonas report two dummy tablets beating one and colour setting the expected direction, red stimulating and blue sedating. Physical placebos such as sham acupuncture beat pills (Hróbjartsson and Gøtzsche 2022), and injected placebo lowered HbA1c more than oral. The more effortful, physical and confident the act, the larger the felt effect, which is what makes elaborate ritual persuasive and why it must be bounded. Kaptchuk asked whether a ritual alone could ever beat a specific treatment (Kaptchuk 2002, abstract). For objective outcomes, section 4 answers no.

7. The ethnographic and historical record

7.1 Lévi-Strauss and the Cuna birth song

Claude Lévi-Strauss's "L'efficacité symbolique" (1949, reprinted in Anthropologie structurale in 1958) analysed a Cuna (Guna) chant from Panama, the Muu Igala, sung during difficult childbirth (Lévi-Strauss 1949, publication details from secondary sources). The text was obtained in 1945 by the Swedish ethnographer Henry Wassén from the Cuna collaborator Guillermo Haya and published with Nils Holmer in Göteborg in 1947 (Holmer and Wassén 1947, catalogue record). Lévi-Strauss did no fieldwork and read it in translation (Favret-Saada 2014, search excerpt).

The tradition says the singer's spirit helpers journey to Muu, the power that forms the foetus, to recover the woman's soul. Lévi-Strauss inferred that the song turns chaotic pain into an ordered story that acts on the body. The record shows no outcome: no birth, no woman, no result. Atkinson noted that he assumed the cure (Atkinson 1987). Others noted that the patient may not understand the chant's archaic language (Sherzer, cited in Atkinson 1987), that the text was read out of its setting (Laderman 1987) and that the spirits' route is disputed (Heibig 1985). Mjönes argued that the full source shows manual intervention, drugs and psychological influence used together (Mjönes, search excerpt only [VERIFY]). Grade D for symbols resolving obstructed labour, C for a confident and meaningful presence reducing fear and pain. Obstructed labour kills by rupture, haemorrhage and sepsis, and no chant changes the size of a pelvis.

7.2 Katz and the !Kung healing dance

Richard Katz described the night-long healing dance of the !Kung (Ju/'hoansi) of the Kalahari (Katz 1982, summaries only). Women sing and clap round the fire. Dancers, mostly men, enter !kia as n/um "boils" in them, and lay hands on everyone present to "pull out" sickness. Dances ran about four times a month. By adulthood about half of men and a third of women had become healers (figure attributed to Dowson in the secondary summary used for Katz 1982 [VERIFY]). Healing was free (Katz and Biesele 2010).

The tradition says the dance pulls out sickness. The record holds no outcome data. Science infers a maximal dose of attention, touch and social repair. Comparing /Kae/kae in 1968 and 1989, Katz and Megan Biesele record home brew from the mid-1970s, a clinic from 1974 giving penicillin for ailments the dance had treated, a school from 1976, and by 1989 schooled young people doubting the dance and healers talking of payment (Katz and Biesele 2010). The dance gave consolation and belonging that penicillin does not, and penicillin cured what the dance did not. A village needs both.

7.3 Turner and the Ndembu doctor

Victor and Edith Turner worked among the Ndembu of Mwinilunga district, Northern Rhodesia (now Zambia), in the early 1950s. Turner's essay "A Ndembu Doctor in Practice" (Turner 1967) and The Drums of Affliction (Turner 1968), read only through secondary summaries, follow the doctor Ihembi treating Kamahasanyi for fatigue, palpitations, bodily pains and the sense that people spoke against him. The diagnosis was an ihamba, a dead hunter's tooth biting inside the body. Cupping horns were applied, villagers had to confess hidden grudges, and at the climax Ihembi produced a tooth from the pot where the horns were washed, after which habitually hostile neighbours greeted each other warmly. A secondary source says Ihembi was later fined for deception [VERIFY].

The tradition says a tooth was removed. The record shows sleight of hand and a real release of social tension, but not Kamahasanyi's later health. The working parts were the airing of conflict, restored belonging, attention and touch. The deception was needed for none of them and cost the healer his standing.

7.4 The first controlled tests of ritual

In 1784 Louis XVI's commissioners, among them Benjamin Franklin, Antoine Lavoisier and Jean-Sylvain Bailly, tested Franz Anton Mesmer's animal magnetism by keeping subjects ignorant of whether they were being magnetised (Royal Commission 1784, secondary summaries). A secretly magnetised tree did nothing. Plain water called magnetised provoked crises. The report of 11 August 1784 found that the fluid did not exist and the effects came from imagination. In Bath in 1799 John Haygarth made painted wooden copies of Elisha Perkins's patented metal tractors. Four of five rheumatic patients reported relief, and the metal tractors did the same the next day (Haygarth 1800). The effects were real to the patients, the theory false, and the tractors stayed profitable.

7.5 What the ethnography cannot tell us

Ethnographies rarely record outcomes. Kleinman and Sung's "Why do indigenous practitioners successfully heal?" (Kleinman and Sung 1979) is widely cited for the view that healers succeed with self-limiting, chronic non-fatal and somatised complaints, but I could not read it [VERIFY]. Nor could I read Waldram's review of how traditional efficacy should be judged (Waldram 2000).

8. Nocebo: the harm of fear and of words

Walter Cannon gathered reports of death after curses and proposed lethal over-activity of the sympathetic nervous system (Cannon 1942, secondary). The evidence was anecdotal, Curt Richter's 1957 rat experiments suggested slowing of the heart instead, and the question remains open. Grade D. The practical danger is that a person who believes themselves cursed stops eating, drinking and seeking help.

The modern record is firmer.

- Men told of possible sexual side effects of finasteride reported them in 43.6 per cent of cases, against 14.3 per cent of men not told, among 107 completers (Mondaini and others 2007, abstract). One secondary source gives 15.3 per cent.
- In the SAMSON trial in London, 60 patients who had stopped statins took statin, identical placebo and no tablet in random months for a year. Symptom scores were 8.0 with no tablet, 15.4 on placebo and 16.3 on statin, a nocebo ratio of 0.90. Half were back on statins six months later (Wood, Howard and Finegold 2020, Howard and others 2021).
- In 12 COVID-19 vaccine trials, 35.2 per cent of 22,578 placebo recipients reported systemic side effects after the first dose, against 46.3 per cent of vaccine recipients, so 76 per cent of first-dose complaints were attributed to nocebo (Haas and others 2022, press summaries).
- Across 1,271 trials with 250,726 placebo patients, a median of 49.1 per cent reported an adverse event and 5 per cent dropped out because of one (Howick, Webster, Kirby and Hood 2018).
- Telling women "you will feel a big bee sting, this is the worst part" before a local anaesthetic raised their pain against a reassuring script (Varelmann and others 2010, secondary summary only [VERIFY]). In an older study, 7 of 15 patients warned of headache after lumbar puncture got one, against none of 13 not warned (Daniels and Sallie 1981, secondary only [VERIFY]).

Grade A for nocebo effects on reported symptoms.

Honest framing helps a little. Telling patients that "60 per cent of people do not get a sore arm" rather than "40 per cent do" reduced reported side effects and absence from work after influenza vaccination (O'Connor 1996, as reviewed in Barnes and others 2019), and three of four attribute-framing studies showed small reductions (r = 0.11 to 0.24) (Barnes and others 2019). A consensus panel including Colloca, Benedetti and Kirsch backed tailored information about placebo and nocebo effects and training for clinicians (Evers and others 2020, abstract). Grade B.

9. Drawing the lines

9.1 Where the meaning response is the real mechanism

The meaning response is legitimate, and sometimes the main therapy, when the complaint is mainly felt (pain, nausea, bowel discomfort, fatigue, poor sleep, low mood, anxiety, grief), a serious cause has been looked for and reasonably excluded by the red-flag check, the illness usually settles or is chronic and not life-threatening, and the ritual costs little and harms nothing. Then keep and strengthen what the trials show carries the effect: time, undivided attention, asking what the illness means, touch where welcome, a short silence of attention, a clear explanation, honest hope, a physical act of treatment and a return visit. Rites that bring grudges into the open, as Turner's ihamba did, do work that no drug does, and chronic distress slows healing (Kiecolt-Glaser and others 1995). Keep them as rites of comfort and repair, never as cures of objective disease.

9.2 Where it masks disease and kills by delay

The trap has a simple shape. The patient feels better, the disease advances, everyone stops worrying, and the patient dies of something treatable. Among patients with curable breast, lung, colorectal or prostate cancer in the United States National Cancer Database, those who chose alternative medicine alone died at 2.5 times the rate of matched conventionally treated patients (hazard ratio 2.50, 1.88 to 3.27). For breast cancer the hazard ratio was 5.68, and five-year survival 58.1 against 86.6 per cent (Johnson, Park, Gross and Yu 2018, observational). Of 172 American children who died between 1975 and 1995 after faith healing replaced medical care, 140 had conditions with over 90 per cent survival under care (Asser and Swan 1998). In appendicitis, rupture risk stayed at 2 per cent or less for 36 hours of symptoms and then rose by about 5 per cent for every further 12 hours, though later studies dispute the threshold (Bickell and others 2006, secondary).

Where the village truly has nothing that would change the outcome, comfort is the treatment. The trap is to give comfort instead of the drained abscess, splint, rehydration, stretcher or salvaged antibiotic the village does have.

9.3 Using it without deceit

Most of the meaning response survives honesty. Open placebos work on felt symptoms (section 5). Warmth, attention and confidence carry most of the effect (section 6). "This medicine works and it is starting now" is worth as much as the dose (Bingel and others 2011). A firm prognosis helps when it is true (Thomas 1987). The rules are short. Never claim a remedy reaches a cause it does not. Never say "cure" when you mean "ease". Never invent a mechanism. Say what you know: that care, rest and expectation reduce pain and distress, that the body heals many things by itself, and that you are watching for the signs that it is not. For the dying patient who wants a cure, honesty means not promising what will not come, and promising, truthfully, company, relief of pain as far as the village can give it, and no abandonment.

Evidence grades

Practice or claim	Grade	What the tradition says	What the record shows	What science infers
Warm, attentive, confident consultation with time and questions about meaning	A	Healer's presence heals	IBS adequate relief 62 against 44 per cent with minimal contact (Kaptchuk 2008), better recovery in general practice (Thomas 1987), small benefit in pooled trials (Howick 2018)	Expectation and care act on pain and distress pathways
Firm, truthful positive prognosis for self-limiting complaints	B	Reassurance	64 against 39 per cent better at two weeks (Thomas 1987, unblinded)	Same as above
Honest framing of side effects ("most people do not get this")	B	Not applicable	Small reduction in reported side effects in 3 of 4 framing studies (Barnes 2019)	Nocebo is expectation-driven
Open-label placebo for IBS, fatigue, chronic pain, low mood	A for small self-reported effect, X for objective change	Not applicable	SMD 0.35 overall, 0.09 objective (Fendel 2025)	Conditioning and expectation without deception
Conditioned placebo to spare scarce analgesics	C	Not applicable	30 per cent opioid reduction in one pilot (Flowers 2021)	Conditioning
Community healing dance or rite for pain, grief, distress, social conflict	C	Pulls out sickness, keeps the dying alive	No outcome data (Katz 1982, Turner 1967)	Maximal dose of attention, touch, social repair

Practice or claim	Grade	What the tradition says	What the record shows	What science infers
Ritual or symbol for obstructed labour, pneumonia, sepsis, cancer, asthma attack, diabetes, fracture	X	Cures	No recorded cure, objective outcomes do not shift (Wechsler 2011, Chvetzoff 2003, Meissner 2007)	No mechanism reaches the cause
Death by curse through fear alone	D	Sorcery kills	Anecdotal (Cannon 1942)	Plausible but unmeasured, the practical risk is self-neglect
Nocebo from warnings and negative words	A	Not applicable	Finasteride, statins, vaccines, injections (sections 8.2)	CCK and HPA pathways (Benedetti)
Deceptive placebo, produced "extractions", invented mechanisms	X for ethics	Proof of power	Fines and loss of trust (Ihembi, secondary), refutation (Franklin 1784, Haygarth 1800)	Effects come from meaning, deceit adds risk not benefit

Means ledger

The practices are the honest consultation, the ritual of care, nocebo-free speech and the time-limited trial.

Rung	What can be done	What it changes
Hands and knowledge alone	Honest consultation (Protocol 1), red-flag check, positive framing of risks, a fixed return time, grudge-airing when distress is social	Most of the effect on pain, nausea, bowel and mood complaints. Catches red flags early, which is the main life-saving step
At the hearth	An honest vehicle (warm boiled water with salt or sugar, a flour and sugar pellet) on a schedule with honest words. Warm compress. A quiet, clean corner. A marked tally of symptoms	Adds the effect of a physical act and schedule. The tally shows whether things are really improving
Garden and still	Distinctive vehicle preparation (tinctures, salves) used both for real pharmacology and as conditioned cues. A scale for consistent doses. Beeswax capsules or pastilles for a recognisable honest pill	Allows conditioned dose-sparing of scarce analgesics. Consistency strengthens expectation. Risk: patients confuse the ritual vehicle with a real drug, so label honestly

Rung	What can be done	What it changes
Village dispensary	Trained lay healer with a script and a case book of complaints and outcomes at the deadline. Thermometer if salvaged. Microscope where trained	Turns anecdote into a record. Objective measures (temperature, pulse, breathing rate, urine, blood film) break the trap
District infirmary	Nurse or doctor reviews every patient whose complaint did not settle by the deadline. Simple tests on the lab bench. Ten beds for observation. Structured community rituals (grief rites, reconciliation) offered alongside treatment	Catches the patients for whom the meaning response was masking disease. Moves the meaning response from substitute to adjunct
Hospital before the Fall (reference)	Empathy and communication training, placebo-controlled trials, imaging and blood tests that separate felt from measured improvement, specific drugs given openly with positive expectation	Real drug plus meaning, with objective checks. Even here, hidden or curt delivery reduces effect (Colloca 2004)

Harm test

How it kills or maims when done wrong. By delay, when felt relief from ritual is taken as cure of a disease that is progressing (section 9.2). By nocebo, when frightening words or curses increase pain, provoke symptoms or drive a patient to stop eating, drinking or taking a needed treatment (section 8). By loss of trust, when a deceptive ritual is exposed and patients then refuse real treatment. By exploitation, as with Perkins's tractors sold after their refutation.

The dose or error that harms. Any ritual used instead of a red-flag referral. Any promise of cure for an objective disease. Any spoken prediction of pain, side effects or doom that is not needed for consent. Any delay beyond the deadline set for a time-limited trial.

Who must never receive ritual alone. Infants and young children with any danger sign (unable to drink or breastfeed, vomiting everything, convulsions, lethargy or unconsciousness) (PAHO IMCI job aid 2005, secondary). Pregnant and labouring women with bleeding, fits, prolonged labour or fever. The old, who may show serious infection only as confusion or weakness. The dehydrated. Anyone with breathlessness, chest pain, abdominal pain that is getting worse, fever over several days, a hot swollen limb or a wound that smells. People with dementia, in whom the placebo component of treatment is weakened (Benedetti 2006), so analgesia must not be reduced on the assumption of a ritual effect.

Misidentification and contamination. No plant is used in this report. Where a ritual vehicle is made at the hearth, use boiled water and food-grade sugar, salt or flour only. Honey should not be given to infants under one year [VERIFY in the series' honey report]. Never let a ritual vehicle resemble a real drug the village holds, or the two will be confused in a crisis.

Signs that it is going wrong. The patient feels better but breathing rate, pulse, temperature, colour, fluid balance, wound size or smell, walking or eating are the same or worse. The complaint persists at the deadline. New symptoms appear, or the family sees a change the patient denies.

What to do then. Stop the ritual as treatment, say honestly that more than comfort is needed, use the best means the village has, and keep comfort going alongside.

Historical cases of harm. The 281 cancer patients in the National Cancer Database who chose alternative medicine alone (Johnson 2018). The 172 children who died under faith healing (Asser and Swan 1998). Wechsler's asthma patients, who felt better on a dummy inhaler while their airways stayed narrow (Wechsler 2011), a model of how such deaths happen.

Red flags

These are the signs that a patient will die or be disabled without what ritual and attention cannot give. Any one of them ends the use of ritual as the main treatment.

- In a child: unable to drink or breastfeed, vomiting everything, convulsions, lethargy or unconsciousness (WHO IMCI general danger signs, via PAHO job aid 2005).
- Breathing: fast or laboured breathing, lips or tongue blue or grey, unable to speak a full sentence.
- Circulation: fainting, cold sweating, fast weak pulse, bleeding that does not stop, black or bloody stool or vomit.
- Abdomen: pain that is constant, worsening, worse on movement or with a rigid belly, especially beyond 36 hours (Bickell 2006).
- Infection: fever with stiff neck, rash that does not fade, confusion, or a wound that is red, hot, spreading or smelling.
- Pregnancy: bleeding, fits, severe headache, labour beyond a day, fever after birth.
- Any new weakness of one side, loss of speech, or sudden worst-ever headache.
- A lump that grows, unexplained weight loss, or blood where it should not be.
- A patient who believes themselves cursed and has stopped eating or drinking.

What to do anyway. Use every means the village has: fluids, warmth, positioning, drainage, splinting, any salvaged drug, transport to the district if it exists. Then, and alongside, give everything the meaning response can give, because it reduces suffering even when it cannot change the outcome. Honest comfort sounds like this: "This is serious. We are doing everything we can. I will stay with you. We will keep the pain down. You are not alone." It does not sound like "you will be fine" when you do not believe it.

The case against

The statisticians. Hróbjartsson and Gøtzsche find small effects, mainly on self-reported pain and nausea, in trials mostly at high risk of bias (Hróbjartsson and Gøtzsche 2001, 2022). Kienle and Kiene showed the founding 35 per cent figure was spontaneous recovery and regression to the mean (Kienle and Kiene 1997). The open-label effect halved between 2021 and 2025 (von Wernsdorff 2021, Fendel 2025). On this view, much of what healers call the meaning response is natural recovery they happen to witness, plus patients being polite.

The sceptical physicians. David Gorski and the Science-Based Medicine writers argue that elevating subjective improvement over objective outcomes is dangerous, and that the Wechsler asthma trial shows how self-report misleads (Gorski 2010, Science-Based Medicine critique of Moerman). Edzard Ernst points to publication bias in the open-label literature (Ernst 2021).

The ethicists. Critics of open placebos argue that they replace a lie about the pill with an equivocation about why it works (Columbia bioethics article). Ritual healers have historically combined real care with sleight of hand, as with Ihembi's tooth, and the deceptive part tends to grow because it impresses.

My assessment after weighing both sides. The critics are right that the meaning response is mostly small, mostly subjective and easily inflated. They are right that it never substitutes for a specific treatment of an objective disease. But two findings resist their scepticism. First, the dose-response in the Kaptchuk 2008 trial and the open-hidden difference in Benedetti's work show a real and sometimes large effect of the relationship itself, beyond natural course, because the comparison groups had the same natural course. Second, nocebo effects are large, consistent and objective

in their consequences (patients stopping statins, missing work), so the way a healer speaks has measurable effects whether or not the healer intends them. A village healer cannot opt out of the meaning response. Every word and gesture produces one, for good or ill. The only choice is whether to use it well and honestly.

The romance of ritual says the old healers cured with symbols, but the record holds no cure of an objective disease by symbol alone. The romance of the hospital says attention is a soft extra, but the trials show it can double an opioid's effect or cancel it.

Today, before the Fall, the meaning response is best used as an adjunct to specific treatment. After the Fall, for the many complaints with no specific treatment available, it may be the main treatment. The danger rises with that shift, because the objective checks that catch masked disease also become scarce.

10-line summary

1. Placebo interventions have small effects in general, mostly on self-reported pain and nausea (Cochrane, 234 trials). Grade A.
2. Warm, attentive, confident care given in a structured way roughly doubles relief in irritable bowel over a curt version of the same ritual (62 against 44 per cent). Grade A.
3. Expectation can double or abolish a real opioid's effect, and hidden treatment works less well than open treatment. Grade A to B.
4. Open-label placebos work modestly on self-reported symptoms (SMD 0.35) and not on objective outcomes (0.09). Grade A.
5. Objective outcomes barely move: FEV1 in asthma, tumour size (1 to 3 per cent response), HbA1c (0.12 points), biochemistry (g 0.03). Grade A to B.
6. Nocebo is as real as placebo: about 90 per cent of statin side-effect burden and about three-quarters of first-dose vaccine complaints were reproduced by dummies. Grade A.
7. Honest positive framing reduces reported side effects a little. Grade B.
8. Ethnographic accounts of ritual cure (Cuna, !Kung, Ndembu) record no measured outcomes. Grade D for cure, C for comfort and social repair.
9. Ritual substituted for treatment kills: hazard of death 2.5 times higher in cancer, 140 of 172 faith-healing child deaths were from highly survivable conditions.
10. The healer's task is to give the full meaning response honestly and to set a deadline and objective checks so that it never hides a treatable disease.

Open questions

- How large is the meaning response in a small community where healer and patient know each other? The trials are almost all industrial.
- Does an open-label effect last beyond three to six weeks? Most trials are short.
- Can conditioned dose-sparing safely stretch scarce analgesics after the Fall? Only pilot data exist.
- Do traditional communal rites improve any objective outcome, such as survival after childbirth, through reduced fear and social support? No outcome studies found.
- Does the effect of the healer depend on the healer's own belief in the remedy? Not well tested.
- How should nocebo risk be weighed against the duty to inform? The framing evidence rests on six studies.
- How much of placebo-arm variation between countries (ulcer healing 16.7 against 62.4 per cent) is culture and how much is diagnosis and concealed treatment?

Sources to read in full

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At the bedside after the Fall

Household

Minimum viable version. One adult knows the red flags by heart, gives the honest consultation (sit, ask, listen, touch, explain, truthful prognosis), gives a simple ritual of care (warm drink, warm cloth, quiet rest, a schedule) and sets a deadline. Speak of pain and side effects in positive frames. Never curse a child or tell them they will get worse.

What it needs to start. A memorised red-flag list. A way to mark time (a notched stick or a slate). Clean water, a fire, a cup, a cloth. No plants are required.

First failure to expect. The family takes a child's improved mood after care as recovery from a chest infection, while the breathing rate is still rising. Counter it by counting breaths and watching drinking, not by asking "do you feel better".

Village of 300

Minimum viable version. A trained lay healer gives the 45-minute first consultation for chronic and unexplained complaints, keeps a case book (complaint, ritual, deadline, outcome) and refers red flags at once. The village keeps one or two communal rites for grief and reconciliation, with honest words about what they do. Scarce drugs are given openly with positive expectation, never hidden, and may be stretched by Protocol 6 in non-dangerous chronic pain.

What it needs to start. A literate healer, a script (Protocols below), a case book, a quiet room or corner, a timepiece for counting pulse and breaths, a thermometer if one is salvaged, and the agreement of the village elders that rites are for comfort and repair, not for cure of objective disease.

First failure to expect. Trusted for comfort, the healer is asked to treat everything with ritual, and an appendicitis or pneumonia is held for a second or third session. Counter it with the deadline rule and the red-flag list, enforced by the case book.

District of 3,000

Minimum viable version. A nurse or doctor reviews every ritual-treated case unsettled by its deadline, audits village case books each season to see which rituals help and which mask disease, trains lay healers in the honest consultation and nocebo-free speech, and supports rites of grief after deaths in the infirmary.

What it needs to start. Records from the villages, a lab bench that can check blood, urine and stool, a microscope, ten beds for observation, and messengers or carts to move patients.

First failure to expect. Over-reliance on self-report in the audit, so that rituals look better than they are. Counter it by adding at least one objective outcome to each audited complaint (return to work, weight, temperature, wound size, death).

Protocols

Protocol 1. The honest consultation (for any patient, first visit)

Time: 30 to 45 minutes for a first visit for a chronic or unexplained complaint, 10 to 20 minutes on return. Based on Kaptchuk 2008 and Thomas 1987.

- ☐ Sit at the patient's level. For the first minute, only listen.
- ☐ Ask what is wrong, since when, what makes it better or worse, what they think causes it and what worries them most. Ask about sleep, food, work, family and quarrels.
- ☐ Repeat back what you heard in their words and ask if you have it right.
- ☐ Count breaths for a full minute, count the pulse for a full minute, feel the temperature, look at colour, look at and smell any wound. Write the numbers down.
- ☐ Run the red-flag list (Protocol 4). If any flag is present, go to Protocol 4 now.
- ☐ Hold about 20 seconds of quiet attention, for instance while feeling the pulse.
- ☐ Explain plainly what you think is happening and what you are unsure of. If the complaint usually settles, say so confidently and say when.
- ☐ Say what you and the patient will each do. Set a deadline and return time (Protocol 3).
- ☐ End with honest hope and an invitation to return sooner if anything new happens.

Tolerance: the numbers in the seventh step are not optional. The rest can be shortened, but not the red-flag check.

Protocol 2. The honest ritual of care (for pain, nausea, bowel upset, fatigue, low mood, poor sleep)

Based on Kaptchuk 2010 and Hoenemeyer 2018. Use only when no red flag is present.

- ☐ Choose a vehicle that is safe and honest: a warm cup of boiled water with a pinch of salt or a teaspoon of sugar, or a small pellet of flour and sugar. Do not use honey for a child under one year [VERIFY].
- ☐ Give it on a fixed schedule: twice a day, morning and evening, for 14 to 21 days.
- ☐ Say, in your own words: "This cup has no medicine in it. It is a way of helping your body do what it already does. Taking it regularly, with rest and care, helps many people with this kind of trouble feel better. You do not have to believe in it for it to help. Take it every morning and every evening."
- ☐ Pair it with warmth, rest, a quiet place, gentle movement and food the patient can keep down.
- ☐ Ask the patient to mark each day how bad the symptom was, from 0 to 10, and review at the deadline (Protocol 3).

Never: say it contains a medicine, say it will cure a disease, or use it for any objective illness.

Protocol 3. The time-limited trial (the guard against the trap)

- ☐ At the first visit, write: the complaint, the objective numbers (breaths, pulse, temperature, wound size, weight), the treatment or ritual given, and a deadline.
- ☐ Deadlines: 24 hours for any abdominal pain, fever, or breathing complaint. 48 to 72 hours for a minor wound or a cough without fever. 7 days for back pain or a bowel upset without red flags. 14 to 21 days for chronic pain, fatigue or low mood. These deadlines are my synthesis from the evidence reviewed here and must be checked against the series' condition-specific reports [VERIFY].

- ☐ At the deadline, re-measure. If the numbers are worse, or the same with the complaint persisting, stop ritual-only care and escalate.
- ☐ If the patient feels better but the numbers are worse: treat as worse. This rule is the core lesson of Wechsler 2011.
- ☐ Record the outcome in the case book.

Protocol 4. Red flags and escalation

- ☐ Check the Red flags list at every visit. If any flag is present, say plainly that this needs more than comfort.
- ☐ Use the most effective treatment the village has, at once, and arrange transport to the district if it exists. Keep comfort and presence going alongside.
- ☐ Write down when the flag was found and what was done.

Protocol 5. Nocebo-free speech

Based on Barnes 2019, Evers 2020, Bingel 2011 and Mondaini 2007.

- ☐ Before a painful act: say what you will do to make it easier ("I will numb this first", "I will be quick"), not "this will hurt badly".
- ☐ When giving a real drug: say it works and when it will start ("this will start easing the pain in about half an hour"). Never give a scarce drug hidden if you can give it openly.
- ☐ When warning of side effects: give the warning that consent requires, framed by those who do not get it ("most people, about 9 in 10, have no trouble with this"). Use real numbers only.
- ☐ Never predict doom you do not know. Never use curses, threats or frightening stories to make a patient comply.
- ☐ When a patient believes they are cursed: take it seriously, ask what they fear, check food and water intake, arrange community support, and if the village has a trusted rite of release, use it alongside care.

Protocol 6. Conditioned dose-sparing of a scarce analgesic (chronic, non-dangerous pain only)

Based on the Flowers 2021 pilot, Grade C. Do not use for acute pain of unknown cause, for cancer pain at the end of life, or for anyone with dementia (Benedetti 2006).

- ☐ For 5 to 7 days, give each dose of the real analgesic together with a distinctive honest vehicle (same cup, same words, same time).
- ☐ Tell the patient openly what you are doing and why: "We are teaching your body to respond to this ritual, so that we can use less of the medicine. Sometimes the cup will come without the medicine. I will always tell you when."
- ☐ Then replace one dose in four with the vehicle alone, telling the patient.
- ☐ Record pain scores from 0 to 10 twice daily. If average pain rises by 2 points or more over three days, return to full doses.
- ☐ The figures in this protocol (5 to 7 days, one in four) are my own cautious adaptation, not tested values [VERIFY].

Numbers to carry

1. Placebo against nothing, for pain: a small effect, about 6.5 mm on a 100 mm line (Hróbjartsson and Gøtzsche 2001).
2. Care makes the difference: adequate relief in irritable bowel 28 per cent with nothing, 44 per cent with a curt ritual, 62 per cent with a warm 45-minute one (Kaptchuk 2008).
3. Positive consultation: 64 against 39 per cent better at two weeks (Thomas 1987).

4. Words over a drug: positive expectation roughly doubled an opioid's effect, negative expectation abolished it (Bingel 2011).
5. Feeling better is not being better: in asthma, a dummy inhaler gave 45 per cent felt improvement against 50 per cent for the real drug, but lung function rose 7 against 20 per cent (Wechsler 2011).
6. Tumours do not shrink by belief: 1 to 3 per cent response on placebo (Chvetzoff and Tannock 2003 and later).
7. Nocebo is large: about 90 per cent of statin side-effect burden came from the act of taking a pill (Howard 2021).
8. Ritual instead of treatment: 2.5 times the death rate in curable cancers (Johnson 2018).
9. Delay has a price: appendicitis rupture risk stays at 2 per cent or less for the first 36 hours, then about 5 per cent for every 12 hours more (Bickell 2006).
10. Every ritual gets a deadline and a number to re-measure.

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