TR-06 European folk and wise-woman medicine: midwives, cunning folk and what the record shows they knew

HEALING after the FALL, research library, TR-06

Researched 10 October 2026 by Claude Opus agent for THRIVING after the FALL, Book Four. Library document, unverified.

This report is about the healers, not the plants. The plants, with their doses and grades, are in PH-01 (THRIVING library, PH-01). The birth attendants are in TR-14, the dangerous remedies in TR-15, the salves in ME-11, foxglove in ME-07, ergot in MA-02 and variolation in HY-10. This report cites those and does not repeat them. Abortifacient folklore belongs to MA-09 [OWNER] and appears here only as a record of harm.

Two romances distort the wise woman: the persecuted healer who burned for what the doctors later stole, and the old wife whose cures were dirt and spells. The record supports neither. It shows a crowded market of lay healers who were sometimes first, often harmless, occasionally lethal, and almost never counted.

Findings by section

1. The healers on their own terms

Who they were. The records name several kinds of lay healer, and their clients kept the kinds apart. The *charmer* held one cure for one complaint, such as burns, warts, a sprain or the "wildfire" of erysipelas. Often the power was in the person, such as a seventh son, a blacksmith or a widow (Ballard 2009). The *cunning man* or *cunning woman* (also wise man, conjuror, white witch, and in Wales the *dyn hysbys*) was a general practitioner of the invisible. They unwitched, found stolen goods, told fortunes, made love charms and treated illness (Davies 2003). The *herb woman* sold simples. The English *midwife* was licensed by her bishop and swore an oath against "witchcraft, charm, or sorcery", in a form found in Bishop Bonner's injunction of 1554 (Midwives of Old, search summary only, and Fox and Brazier 2024). The *bonesetter* was often a farmer or smith. The *mistress of a household* dosed family, servants and poorer neighbours from her manuscript receipt book (Leong 2018).

How they understood illness. In this world illness had three kinds of cause, and the cause decided the remedy. Natural illness came from cold, wet, worms, corrupted humours or a disordered blood, and was treated with simples and receipts. A plant was chosen for its *virtue*, which might be read from its taste and heat, from its *signature* (a likeness of form to the part it cured), or from the planet that ruled it. Culpeper, for example, gave every herb a planetary ruler and paired the ruler with the disease (Culpeper 1652). Illness sent by another person was called "overlooking", the ill-wish or the evil eye. It needed counter-magic: a written charm sewn into a bag, a witch bottle, or the naming and confronting of the witch (Davies 1999). Illness sent by God was borne with prayer. Cure also came through the healer's *gift*, and charm words often passed only under rules of transmission. By the rule in SY-04 (THRIVING library, SY-04, section 7), the book says such restricted cures exist and are held by their custodians, and does not reproduce their words. That some Ulster and Irish charm cures were held this way is my reading of Ballard 2009 and the Schools' Collection, and I have not confirmed it from a primary source [VERIFY].

The logic, taken seriously. The system was coherent and in one respect shrewd. Illness the physician could not name, or that came with a quarrel, went to the cunning man, who offered a cause the patient could act on, and his cure often worked on the fear itself (Davies 1999). The natural remedies were empirical in a loose sense: tried, and if the patient lived, written down and tried again. What the system lacked was any count of those who did not recover.

The evidence attached. The complaints the Ulster folk cures were used for are mostly self-limiting. In the 1965 Ulster Folk Museum questionnaire (112 replies, 1,153 cures), the complaints ranked by number of cures were warts (162), whooping cough (134), sprains (120), styes (113), toothache (104), burns (101), headache (70), cramp (64), mumps (62), jaundice (37), asthma (35), erysipelas (31), epilepsy (28) and rickets (11) (Ballard 2009). Most of these usually get better without treatment [VERIFY: my inference from clinical course, not sourced here], so a folk cure applied to them will look like a success most of the time. That is the first thing the book must teach about its own remedies.

2. Cunning folk in the record: practice, fees and failure

Owen Davies's study of nineteenth-century court and newspaper records is the closest thing the cunning folk have to an outcome register (Davies 1999, read in full). His 2003 book covers five centuries (Davies 2003, review only).

What they prescribed. Clients came for persistent, undiagnosed illness and for bewitchment. "Dr Harris of Cwrtycadno" in Carmarthenshire, of a family of wise men for three generations, was arrested in 1867 for false pretences after diagnosing bewitchment and supplying a sewn charm. Medicines were sold as well as charms. Mother Arthurs of Exeter sold a medicine of 18 ingredients for £2. When the patient grew worse she offered a dearer one. In 1892 Mary Jane Saunders of Lufton was given herbs that analysis found to contain "nothing deleterious" (Davies 1999).

Fees. Fees ran from nothing for a charmer to sums a labourer could not easily pay. Mrs Cox, a Plymouth wise woman, charged a sovereign to cure a pauper, which came before the Plympton Board of Guardians in June 1876. She claimed to be the seventh daughter of a seventh daughter of a seventh daughter. James Tunnicliff of Stafford took about £30 from one client in 1857. Isaac Rushworth of Leeds charged £5 for charms in 1857. W. H. Thomas of Exeter charged two guineas for a powder in 1903 (Davies 1999). For comparison, Martha Ballard in Maine charged 6 shillings, less than $2, for a delivery, where the town doctor charged $6 (Ulrich 1990). Davies's review in 2003 found that more than 80 per cent of cunning folk whose occupations are known were craftsmen, tradesmen or farmers, that they worked in towns as well as villages, and that prosecutions were few and mostly brought by dissatisfied clients (Davies 2003, review).

How failure was handled. The system absorbed failure. The witch was stronger than thought, a rival had interfered, or a dearer remedy was needed, as with Mother Arthurs. Failure reached the record only when a client went to the magistrates or someone died. That is the survivor bias of the whole tradition.

The harms in the record. Four cases from Davies 1999 show the range. - *Esther Peadon*, Dowlish, Somerset, 1858. She was indicted for manslaughter after Sarah Palmer, six months after giving birth, died following her medicine. The analyst William Herapath found belladonna, stramonium, bryony, tobacco, hemlock and hemlock water dropwort in it. Peadon also practised urine-scrying. - *James Tunnicliff*, Stafford, 1857. He was found with white bryony root (*Bryonia dioica*). The client's attacks stopped once Tunnicliff was dismissed. He was sentenced to 12 months' hard labour. - *Sarah Whisker*, Norwich, 1846. A cunning woman, she was transported for life for attempting an abortion with white hellebore, which a chemist had supplied [OWNER]. - *Delay of effective treatment.* A Kenton general practitioner recorded an ague patient whose family refused quinine because they believed him bewitched. In 1863 a Worplesdon labourer tried to buy a quarter pound of mercury to dose his "bewitched" wife.

The pattern is that the cunning folk's herbs were mostly inert, and when they were not, they were among the most toxic plants of the English countryside. Their greatest harm was probably not poisoning but delay: a cause that could be acted on in place of a cure that worked [VERIFY: my inference, no count exists].

3. Culpeper and Gerard: what the compendia transmitted

Gerard's Herball (1597). John Gerard's *Herball* was built on Robert Priest's unfinished translation of Rembert Dodoens, unacknowledged after Priest died in about 1596. Mathias de L'Obel was hired to correct it and then dismissed, and Thomas Johnson's edition of 1633 admitted that Priest's work "became the groundworke". The woodcuts came from the Frankfurt *Eicones* of Tabernaemontanus of 1590 (Wikipedia, John Gerard, Edward Worth Library). Gerard transmitted continental learned botany, much of it from Dioscorides, and about half his plants are not native to Britain (Aronson 2005). He records what an educated Elizabethan believed, not what English women did.

Culpeper's English Physician (1652). Nicholas Culpeper was born at Ockley in Surrey on 18 October 1616 and died in Spitalfields on 10 January 1654, aged 37 (Linda Hall Library 2023, Wikipedia). He was apprenticed to an apothecary. He saw up to 40 patients a morning, for little or no payment, and in 1649 he published an unauthorised English translation of the College of Physicians' *Pharmacopoeia*, which made him the College's enemy. His *English Physician* of 1652 and its later editions outsold the official texts for about 250 years (Linda Hall Library 2023). His purpose was political: to put medicine into the hands of people who could not pay a physician.

I read his entries in a nineteenth-century edition (Culpeper 1652, Gutenberg text). What he transmitted falls into three groups.

What holds up. He warned against taking savin inwardly, writing that "inwardly it cannot be taken without manifest danger". He said black hellebore was safer purified than raw, gave a dose by weight, and named goat's milk as the remedy if it did harm. Davies quotes him warning that bryony needs "an abler hand to correct it than most country people have", and that hemlock taken inwardly causes "frenzy" (Davies 1999). His comfrey entry is right in part. He recommends the root for wounds, and comfrey on the skin is grade A for sprains and bruises (THRIVING library, PH-01). But he also recommends a decoction drunk for inward hurts, spitting of blood and ruptures, which is the use PH-01 grades X because of the plant's pyrrolizidine alkaloids.

What harms or misleads. Culpeper's foxglove is a "gentle cleansing" herb of Venus, given for wounds, scrofula and as a purge "both upwards and downwards", and as a decoction in ale for the falling sickness (epilepsy). He says nothing of dropsy. Thus the book that sat in every literate cottage gave foxglove at a dose limited by vomiting, for the wrong disease, 133 years before Withering's *Account* (THRIVING library, ME-07). His pennyroyal entry repeats Dioscorides that it "provokes women's courses" and expels the dead child and the afterbirth [OWNER]. His willow is ruled by the Moon and is given to staunch bleeding and "stay lust". There is nothing on fever, which matters for Stone's case below.

What it is. Culpeper's herbal is learned medicine translated and astrologised. It carried Dioscorides and Galen into the households, where they became "folk" by the nineteenth century, which helps explain why a quarter to a third of current southern Italian folk uses trace to those two authors (THRIVING library, TR-01). When a folk use and a classical use agree, the book cannot count them as two independent witnesses.

4. The household books

Elaine Leong's study of English manuscript recipe books from about 1650 to 1700 shows that receipts were tested and changed by teams of householders across generations. In the Glyd family, for example, a receipt was copied, tried, annotated "probatum" or crossed out, and passed on. Her chapter on "recipe trials" treats the household as a place where knowledge was made by trial (Leong 2018, publisher summary and a review). A reviewer in Times Higher Education judged that her broadest claim was not fully substantiated (Leong 2018, review by Ann Hughes). The household book was a lay trial register, with the cunning folk's weakness: "probatum" when a patient recovered, nothing when one did not.

Joanna Stephens and the stone. In 1738 the *Gentleman's Magazine* praised Joanna Stephens's cure for bladder stone. A public subscription raised £1,356 3s, and Parliament then had the remedy tested on four sufferers before a

committee of examiners. She was paid £5,000 and the recipe was published in the *London Gazette* on 16 June 1739 (Goddard, BAUS). It contained eggshells and snails, soap, swine's cress, honey, wild carrot, burdock seed, ash keys, hips and haws. David Hartley published 155 cases. BAUS suggests the alkaline soap might have dissolved urate stones. Other sources give 28 trustees, including the Archbishop of Canterbury, against BAUS's committee of 22 [VERIFY]. The episode is the household book's moment of glory. The state tested a lay remedy, paid for it and published it. But the test was four patients without controls, and the remedy left no trace in later urology [VERIFY: my inference from its absence in modern sources found here]. Grade D.

Bald's eye salve. A tenth-century English leechbook gives a salve for a sty: two *Allium* species, wine and ox gall, left in a brass vessel for nine days. A Nottingham team reconstructed it in 2015. In mouse wound biopsies it killed up to 90 per cent of MRSA, and in a collagen wound model about one bacterial cell in a thousand survived. None of the ingredients was active alone (Harrison et al. 2015, read through press releases from the University of Nottingham and the Microbiology Society only). There is no human trial, so the salve is grade D with a real laboratory signal. A receipt written down with exact ingredients, vessel and timing can be tested a thousand years later. A receipt held in memory cannot.

What the books got right was to write down quantities and timings and to annotate each trial. What they got wrong was the denominator.

5. Where the folk came first: the named cases

The brief names five cases. On the record, two are genuine folk priority, one is a midwives' practice adopted with harm, one is learned rather than folk, and one is a story invented for an advertisement.

Case	The folk claim	What the record shows	Modern inference	Verdict
Foxglove, Withering 1775	A Shropshire old woman's family receipt of about twenty herbs cured dropsy	Withering picked out foxglove from the receipt and gave it to 163 patients from 1775 to 1784, with 55 more from 13 colleagues. "Mother Hutton" was invented in 1928 for a Parke-Davis advertisement (THRIVING library, ME-07)	Leaf grade B, glycoside grade A, therapeutic index about 2	Folk priority for the receipt, learned work for the plant and the dose

Case	The folk claim	What the record shows	Modern inference	Verdict
Ergot, Stearns 1808	German midwives used "pulvis ad partum" to hasten labour	Lonicer recorded midwives' use in 1565. Stearns published in the *Medical Repository* in 1808. Prescott in 1813 lost 4 children in 22 first labours. After about 1828 ergot was kept for bleeding after birth (THRIVING library, MA-02)	Uterotonic, but raw ergot is grade X for labour (THRIVING library, TR-14)	Folk priority, adopted with deaths
Willow bark, Stone 1763	Folk use of willow for ague	Stone's letter of 25 April 1763 reasons from bitterness like Peruvian bark and the "doctrine of signatures". He gave it to about 50 people over 5 years. Pierpoint says willow had been "relegated" to folk medicine by then (Stone 1763, Pierpoint 1997)	Salicin is grade B for back pain (THRIVING library, PH-01), weak for malaria	Learned, not folk
Smallpox inoculation before Jenner	"Buying the smallpox" from a sick child	Practised in Pembrokeshire "time out of mind" (Williams 1722). Greek women in Constantinople did it every September with a needle (Montagu 1717, in Hektoen 2020)	Variolation grade B, about 2 per cent mortality against 14 per cent natural in Boston 1721 (THRIVING library, HY-10)	Strong folk priority

Cowpox and the dairymaids	Milkmaids who had cowpox did not take smallpox	Benjamin Jesty inoculated his wife and two sons from a cow in 1774. Peter Plett did the same with 3 children in Holstein in 1791 (Pead 2003, Wikipedia)	Jenner's evidence grade D, vaccinia's later record A (THRIVING library, HY-10)	Strong folk priority

Withering. The old woman's receipt held about twenty herbs, so it could not be tested. Withering's contribution was method: one herb separated out, the leaf dried, a written protocol, failures recorded. The book should present the woman as the source of the lead and Withering as the source of the dose, and never print "Mother Hutton" as a historical person (THRIVING library, ME-07).

Stone's willow. Edward Stone, a clergyman of Chipping Norton, wrote to the Earl of Macclesfield on 25 April 1763. The letter was read to the Royal Society on 2 June and printed in volume 53 of the *Philosophical Transactions* (Pierpoint 1997). He had tasted willow bark, found it bitter like the Peruvian bark, noted that the tree grows in the moist ground where agues are common, and followed the maxim that "many natural maladies carry their cures along with them" (Stone 1763). He dried about a pound of *Salix alba* bark over a baker's oven for more than three months. He gave 20 grains (about 1.3 g) every four hours between fits, raised the dose to two scruples, and found a dram every four hours best. He used it for five years on about 50 people. For stubborn autumnal and quartan agues he added one fifth part of Peruvian bark (Stone 1763). His reasoning is the doctrine of signatures, not a folk informant, and Culpeper's willow, the best guide to what English households knew, gives no fever use at all. The story that Stone learned willow from the folk is a modern romance. The brief lists Stone among the cases where folk knowledge came first, and on the record he does not belong there. None of the library reports read for this one makes that claim.

The Welsh inoculators. Perrot Williams, physician of Haverfordwest, wrote to Dr Samuel Brady on 28 September 1722. He said that in Pembrokeshire "buying the smallpox" had been practised "time out of mind", by rubbing matter from a pustule on the skin or by pricking the skin with pins. A lawyer, George Owen, had done it to himself at about fifteen with five or six schoolfellows, and none died (Williams 1722). In Constantinople, Lady Mary Wortley Montagu described "old women who make it their business" every September (Hektoen 2020), and Timonius had reported the practice to the Royal Society in 1714 (Timonius 1714). This is the clearest European case of lay healers holding a powerful, dangerous technique before the physicians. Smallpox is eradicated, and HY-10 draws the lesson about deliberate exposure.

Jesty and Plett. Benjamin Jesty, a farmer of Yetminster in Dorset, had himself had cowpox, and two of his dairymaids had apparently been spared smallpox. In the epidemic of spring 1774 he inoculated his wife Elizabeth and his two eldest sons from a cow at Chetnole. His wife's arm became badly inflamed and she recovered, and neighbours pelted him. In 1805 his son Robert was variolated and did not take, and the Original Vaccine Pock Institution honoured Jesty with gold lancets (Pead 2003, Wikipedia). In 1791 Peter Plett, a tutor in Holstein, vaccinated three children on the milkmaids' lore, reported it to a medical faculty and was ignored (Wikipedia, Peter Plett). Jenner, who published and campaigned, was paid £10,000 in 1802 and £20,000 in 1807 (Pead 2003).

Cod liver oil. Thomas Percival wrote in 1782 that the oil had been in use in Manchester for about ten years and was little known outside Lancashire. The Manchester Infirmary gave out nearly a hogshead a year for chronic rheumatism (Percival 1783, through a search summary). Later writers said the common people of Holland used it for rickets before physicians did (Bennett 1841, search summary only). The use for rickets was right. The oil carries vitamin D, though I have not sourced the modern rickets evidence in this report [VERIFY]. The use for rheumatism was not.

What the cases teach. The folk were first where the effect was large, fast and visible. They were wrong, or repeating the learned, where the effect was slow or the illness self-limiting. Every genuine priority needed a literate outsider to count cases before it became safe.

6. The midwives' record

TR-14 already covers Jane Sharp's 1671 manual, Justine Siegemund's 6,200 births and the harmful newborn customs, such as ash on the cord and withholding colostrum (THRIVING library, TR-14). Two diaries not in the library give the European and colonial midwife something no cunning man has: a denominator.

Martha Ballard, of Hallowell, Maine, kept a diary from 1785 to 1812. Laurel Thatcher Ulrich counted 814 deliveries in it (816 in some counts). In those deliveries Ballard lost no mother at the delivery and five in the lying-in weeks after. Ulrich calculates one maternal death for every 198 living births. She sets this against about one in 150 in the United States in 1930 [VERIFY: the 1930 figure is Ulrich's comparison as summarised, not checked against vital statistics]. There were fourteen stillbirths in the 814 deliveries and five infant deaths within an hour or two of birth. When the young town doctor, Benjamin Page, attended, Ballard recorded his bad deliveries, called him a "poor unfortunate man in the practice", and noted limbs "much dislocated" (Ulrich 1990). Her fee was 6 shillings, against his $6.

Catharina Schrader (1656 to 1746) of Friesland, who died at Dokkum, kept notebooks of her deliveries from 1693 to 1745, numbering between 3,000 and 4,000. Peter Dunn calculated a corrected maternal mortality of 4.6 per 1,000 and a perinatal mortality of 54 per 1,000 (Dunn 2004, search summary only). Her notebooks were translated by Hilary Marland as *Mother and Child Were Saved* in 1987.

What this shows. Two experienced, literate lay midwives, working in homes without antisepsis, had maternal mortality of about 5 per 1,000 [VERIFY against TR-14's pre-antibiotic figures]. The diaries are the best argument that a lay healer with good hands and a written log can do well. They also show the survivor problem: we have Ballard and Schrader because they wrote, and the unlettered midwife may have done much worse or much better.

Licensing. Doreen Evenden recovered from Church licensing records the names of almost a thousand London midwives of the seventeenth century, or about twelve hundred by a reviewer's count (Evenden 2000, publisher description and review only). The licence was a moral and religious check, not a test of skill (Fox and Brazier 2024).

7. The witch-trial question: did the trials target healers?

The thesis, on its own terms. Barbara Ehrenreich and Deirdre English wrote *Witches, Midwives and Nurses* as a pamphlet in 1973. Its argument is that the male medical profession, allied with Church and State, excluded women from healing, and that the witch hunts were part of that exclusion. They say the witch-healers used ergot for the pains of labour and belladonna against miscarriage, and "reportedly" discovered digitalis. They quote Paracelsus as saying he learned all he knew from the Sorceress. They cite Jacoba Felicie, tried in Paris in 1322 for practising medicine without a licence. They put the dead in the "millions", on the authority of "many writers", and say plainly that they are not professional historians (Ehrenreich and English 1973). As a call to the women's health movement the pamphlet succeeded.

What the trial records show. - *Scotland.* The Survey of Scottish Witchcraft holds 3,837 accused, 84 per cent of them women. Only 9 were recorded as midwives, and midwifery figured in the accusations against 10. Folk healing featured in the cases of 141, about 4 per cent, and the Survey concludes that healing was "not something the typical witch seems to have engaged in". Of the 305 accused with a known sentence, 205 were executed, about 67 per cent, a figure the Survey itself calls "probably not very accurate" (Survey of Scottish Witchcraft). Ring and colleagues found 142 healers or midwives among the accused. 51 per cent were found guilty and 90 per cent of those executed (Ring et al. 2024, abstract only). Accused healers fared badly, but they were few. - *Lorraine and Europe.* Robin Briggs worked from about 400 trials in the Lorraine archive. He found that "cunning folk were rarely accused", that healers were at most about 10 per cent of those charged, and that witches were "unlikely to be midwives". Men averaged about 25

per cent of the convicted across Europe, 40 to 50 per cent under the Parlement of Paris, and a majority in Iceland and Estonia (Briggs 1996, through a review in Reviews in History). His total for the whole of Europe is about 40,000 victims. - *The totals.* Brian Levack cut his estimate from 60,000 to about 45,000 executions in his third edition, with 20,000 to 25,000 in Germany (Levack, review in Project MUSE). Ronald Hutton gives about 40,000 and Wolfgang Behringer at least 25,000 for Germany (University of Essex 2024). The "millions" of the pamphlet have no source. - *The midwife-witch.* David Harley's 1990 article traced the idea of the midwife-witch to the *Malleus Maleficarum* of Kramer and Sprenger, published in 1486, and to Margaret Murray in the 1920s. He argued it had been taken up by historians without a check against trial records, and that the records do not show midwives over-represented (Harley 1990, read through bibliographic details and secondary summaries only). Thomas Forbes had raised the question in 1962 (Forbes 1962, not read).

What survives of the thesis. Monica Green (2008) puts a sounder version in its place. Men gained authority over women's medicine from the twelfth century through literacy, Latin and the written gynaecological text, not through burning (Green 2008, publisher description and contents only). Exclusion happened, but by licence and book, not fire.

Verdict. The claim that the trials targeted female healers fails on the counts: about 4 per cent healers and under 1 per cent midwives in Scotland, at most a tenth healers in Lorraine. The claim that women were excluded from medicine by literacy and licensing stands, with Green as its source. The pamphlet's medical claims fail too. Ergot was a midwives' remedy for slow labour, and it killed infants (THRIVING library, MA-02). The book should present the pamphlet as a document of the 1970s, not as history.

8. Salem and ergot

Linnda Caporael proposed in *Science* in 1976 that convulsive ergotism, from rye infected with *Claviceps purpurea*, may have started the Salem accusations of 1692 (Caporael 1976, abstract read). Mary Matossian supported her in 1982 (not read). Nicholas Spanos and Jack Gottlieb replied in the same journal in 1976. They argued that the symptoms reported at Salem were not those of convulsive ergotism, that the afflicted were not the people one would expect if a household's bread was poisoned, and that the abrupt end of the crisis was explained without ergot (Spanos and Gottlieb 1976, secondary summaries only). The Salem Witch Museum's summary adds two points. In the Parris household of four adults and four children, only Betty Parris, aged 9, and Abigail Williams, aged 11, fell ill. Andover, about 20 miles away, produced the most accusations. And one witness later admitted she "did it for sport" (Salem Witch Museum 2023). Sidky notes that ergotism was a recognised disease in the period and would probably have been named (Sidky 1997, search summary only).

Verdict. Not supported, and on the household pattern probably wrong. It is a modern romance of the same kind as the healer-witch: a single physical cause for a social event.

9. The folk surveys against the monographs: what fraction holds?

The brief asks what fraction of surveyed folk uses hold grade A to C evidence. No study answers this directly for the British and Irish record. Three bodies of evidence approach it.

Allen and Hatfield 2004. *Medicinal Plants in Folk Tradition* covers more than 400 species in Britain and Ireland. It draws on more than 1,000 manuscript volumes of the Irish Folklore Commission and about 300 other sources, and it tries to separate genuine oral tradition from uses copied out of herbals. Jeffrey Aronson, a clinical pharmacologist, reviewed it in *Medical History* (Aronson 2005). His tests are the most direct answer to the brief. - Of ten plants listed for gout, including white bryony, elder, tansy and vervain, none is efficacious. Autumn crocus (*Colchicum autumnale*), the source of colchicine and the one real gout drug, appears for measles, jaundice and procuring abortion, but not for gout. - The cancer remedies include greater celandine (*Chelidonium majus*), hemlock (*Conium maculatum*), sorrel and dandelion, but not periwinkle (*Vinca*), the source of real anticancer alkaloids, which is listed for cuts and

nosebleeds instead. - Of nearly 30 asthma plants, one, thorn apple (*Datura stramonium*), has a real anticholinergic action. - Real remedies tend to have one major use. Folk remedies have many, and "the more indications a plant has, the less likely any is beneficial". Dandelion is a diuretic, yet in Tipperary it was used for "every disease". - Folk uses "do not reflect their true pharmacological properties, except occasionally by chance".

On Aronson's samples the hit rate is zero in ten for gout, zero in four for cancer and about one in thirty for asthma, and that one hit is a poisonous nightshade.

The Irish Schools' Collection, 1937 to 1938. More than 100,000 pupils in more than 5,000 schools collected about 740,000 pages of lore, now on Dúchas.ie. Fiona Shannon's thesis drew 5,224 medical entries from 190 schools in Wexford and Roscommon. Most were plants or ritual for minor skin and respiratory complaints (Shannon 2022, abstract only). A 10 per cent sample studied by O'Bríon and colleagues gave 2,967 plant cures, 1,710 animal cures and 744 mineral cures (O'Bríon et al. 2021, search summary only). Koay and colleagues ranked the most cited plants in the same counties: ivy, dandelion, nettle, dock, garlic, comfrey and marshmallow. Dock was used 75 to 93 per cent of the time for the skin, mostly for nettle sting. Dandelion's commonest uses were warts, consumption and jaundice, and nettle's were blood purification and rheumatism. The authors made no comparison with the evidence (Koay et al. 2020).

Set against PH-01, the top seven Irish plants score as follows. Ivy leaf is grade B for productive cough as a dry extract. Garlic is B or C. Nettle leaf is C for joint pain, which matches the folk rheumatism use. Comfrey on the skin is A, which matches its folk use for sprains and bones. Marshmallow is C for cough and sore throat. Dandelion is D. Dock is not in PH-01 (D) (THRIVING library, PH-01). So five of the seven most cited plants hold grade C or better for some use. But for dandelion, ivy and garlic, the graded use is not the use the Irish children recorded [VERIFY: the ivy folk use was not established here].

Pieroni's Balkan and Alpine fieldwork. Andrea Pieroni and colleagues have documented living folk pharmacopoeias across rural southern and south-eastern Europe. In Peshkopia, Albania, they recorded 84 taxa from 32 informants. In the Kosovar Albanian Alps, 98 species in 36 villages, mostly for gut and respiratory complaints. In the Upper Reka valley, 92 taxa. In the Piedmontese Varaita valley, 88 taxa (Pieroni et al., several papers, search summaries only). A review by Pieroni, Pardo-de-Santayana, Firenzuoli and Quave (2013) examined the safety of the most used plants. A 2023 paper in *Plants* on two thousand years of Central European plant use found official monographs for about half the plants it traced (Sõukand et al. 2023 [VERIFY: authorship and figure from a search summary]).

The estimate. Combining these with TR-01's priors: grade C is right about one time in three and grade D about one in ten. Plants with a folk use were 1.4 to 2.6 times as likely as random ones to show activity in the National Cancer Institute screen (THRIVING library, TR-01). This gives a rough answer, which is my inference, not a measured figure [VERIFY]. - *By plant:* of the most cited folk plants, between half and three quarters hold grade A to C evidence for something. - *By use:* of the recorded uses of those plants, perhaps one in five to one in eight hold grade A to C evidence for that use. - *Across the whole record,* including charms, animal and mineral cures and the long tail of plants with many uses, fewer than one use in twenty holds grade A to C evidence.

PH-01's six grade A or B plants out of forty chosen as the best are consistent with this. To PH-01's rule that a grade belongs to the preparation tested, this report adds a second: it belongs to the use tested, not to the plant.

10. The harms

TR-15 holds the register of dangerous remedies and grades pennyroyal (THRIVING library, TR-15). PH-10 covers mistaken identity, including white hellebore taken for gentian, with 1,872 mistaken-identity ingestions reported to ANSES from 2012 to 2018 (THRIVING library, PH-10). TR-13 covers the humoral purges. This section adds the folk-record cases those reports do not hold, and gives history, toxicity and doses of harm only. The abortifacient uses are [OWNER] and belong to MA-09. No method of use is given.

Savin (*Juniperus sabina*), leaf tips. Savin was the abortifacient most feared by nineteenth-century physicians. Pereira's *Materia Medica* of 1854 records a woman of 30 who took it, vomited violently, aborted, haemorrhaged and died (Mohrenheim's case), a second death recorded by Dewees, and a woman who took the oil for 20 days and carried to term (Fodéré). It was unreliable as well as dangerous, causing abortion only "at the risk of the woman's life" (Pereira 1854). Aronson notes that isocupressic acid causes abortion in cattle and that "giving birth under the savin tree" was a medieval euphemism (Aronson 2017). Culpeper forbade it inwardly (Culpeper 1652). Lookalikes: other junipers, including common juniper (*Juniperus communis*), whose berries are a food spice. Savin has a strong, unpleasant smell when crushed [VERIFY]. Grade X. No rung of the ledger.

Tansy (*Tanacetum vulgare*), herb and oil. WHO's food additives committee (JECFA) reported that tansy oil is on average about 50 per cent thujone. Poisoning causes vomiting, convulsions, irregular heartbeat, hepatitis and death, and human deaths are reported without a number. The oral LD50 in rats is 1.15 g per kg (JECFA 1981). A consumer monograph says that as little as 10 drops of oil has killed [VERIFY]. PH-01 sets a thujone limit of 6.0 mg a day for medicinal plants that contain it (THRIVING library, PH-01). It was a known abortifacient in nineteenth-century England (Davies 1999) [OWNER]. Lookalikes: common ragwort (*Jacobaea vulgaris*), also yellow and also toxic to the liver [VERIFY]. Grade X by mouth.

Pennyroyal (*Mentha pulegium*). About 10 ml of the oil causes moderate to severe liver poisoning, and infants have been harmed by the tea (THRIVING library, TR-15). Culpeper printed Dioscorides' abortifacient claim in English, and Carachipita, a mixture containing pennyroyal, caused a death in the Montevideo series below. Grade X for the oil.

Rue (*Ruta graveolens*, *R. chalepensis*). From 1986 to 1999 the Montevideo poison centre recorded 86 women who took plant infusions to induce abortion, using 30 species. The commonest were rue, *Lycopodium saururus*, parsley and Carachipita. Abortion followed in 23. Multiple organ failure followed rue, Carachipita, arnica and burdock. Five women died, four after rue and one after Carachipita, and some needed hysterectomies (Ciganda and Laborde 2003, abstract and summaries only). The series is South American, but rue is a European garden plant with the same folk reputation, and this is the only series with a denominator in this report: abortion in about one woman in four, death in about one in seventeen [VERIFY: my arithmetic]. Grade X [OWNER].

Hellebores and bryony. Black hellebore (*Helleborus niger*) was a drastic purge (Culpeper 1652). White hellebore (*Veratrum album*) is a different, cardiotoxic plant mistaken for yellow gentian (THRIVING library, PH-10), and the one in Sarah Whisker's case. White bryony (*Bryonia dioica*), with red berries and a large white root, was in Tunnicliff's bag and Peadon's mixture (Davies 1999). All grade X, with no rung.

Lead plaster (diachylon). At the end of the nineteenth century, women in the English Midlands and the North ate lead plaster to end pregnancies. A Leicester inquest of 1892 heard of a woman who died after eating it, and the *BMJ* in 1906 reported plumbism from its use as an abortifacient (JAMA 1892, BMJ 1906, titles and summaries only). The practice is said to have followed miscarriages from lead in the Sheffield water in the 1890s [VERIFY: McLaren 1978, not read], which would make it folk medicine in the making: a harm observed and turned into a use. Grade X.

The purges. Purging was the shared therapy of learned and folk medicine (THRIVING library, TR-13). Its harm is dehydration, lethal in exactly the feverish and dysenteric patients it was given to.

How often did folk remedies kill? No denominator exists for the English record. Poisoning was rare enough to reach the courts and common enough to recur (Davies 1999). The book should say that the common folk remedy was inert and the rare dangerous one very dangerous [VERIFY: an inference from case reports].

11. What the book keeps and what it rejects

It keeps, as method: - The midwife's diary as a model case log (Ballard, Schrader). - The household book's written receipt, with exact quantity, vessel and timing, and the habit of annotating each trial (Leong). - The variolators'

and Jesty's principle of controlled deliberate exposure (HY-10). - Withering's habit of separating one plant from a compound and dosing it by a written stopping rule (ME-07). - Stone's habit of reporting a trial in a letter with doses and numbers. - The charmer's and cunning man's attention to the patient's fear, without the accusation.

It keeps, as remedies: only the folk uses that PH-01 grades C or better, at PH-01's doses. Among them are comfrey on the skin, nettle for joint pain, marshmallow for cough, ivy for productive cough and willow for back pain.

It rejects: - Every abortifacient of the folk record, as remedies: savin, tansy, pennyroyal, rue, white and black hellebore, ergot outside the bleeding-after-birth role in MA-02, and lead plaster. The question of what to say about them is for the owner [OWNER]. - Comfrey by mouth, and foxglove from Culpeper or any herbal without ME-07's stopping rule. - The drastic purges: hellebore, bryony, foxglove as an emetic, mercury. - The diagnosis of bewitchment, and every cure that names a person as the cause. - Datura and the other nightshades for asthma, except under PH-01 and TR-15. - Any cure whose only evidence is that it was recorded many times. Repetition is not replication.

Evidence grades

Practice or claim	Grade	Basis
Folk smallpox inoculation (variolation)	B	Boston 1721, about 2 against 14 per cent mortality (HY-10). Obsolete
Cowpox from the cow (Jesty, Plett)	D, later A for vaccinia	Handfuls of cases, later the whole vaccine record (HY-10)
Foxglove leaf by written protocol	B	Withering's 163 patients (ME-07)
Foxglove by Culpeper's dosing	X	Emetic dosing, wrong indication
Willow bark for ague (Stone)	D	50 uncontrolled cases. Salicin B for back pain (PH-01)
Ergot for labour (midwives)	X	Prescott's infant deaths (MA-02, TR-14)
Lay midwife with a case log	B	Ballard and Schrader, about 5 maternal deaths per 1,000
Joanna Stephens's stone remedy	D	Four test patients, uncontrolled
Bald's eye salve	D	Mouse and tissue models only
Cod liver oil for rickets	B [VERIFY]	Folk priority, later clinical record not sourced here
Most cited Irish folk plants, by plant	C or better for 5 of 7	PH-01 cross-check
Recorded folk uses, by use	about 1 in 20 at C or better [VERIFY]	Inference from Aronson, Koay and TR-01
Charms and bewitchment cures	D for comfort, X if treatment is delayed	Davies 1999 cases
Savin, tansy, pennyroyal, rue, hellebores, bryony, lead plaster	X	Case reports, Montevideo series
Witch trials targeted healers	X	Scottish Survey 4 per cent, Briggs at most 10 per cent
Ergot caused Salem	X	Household pattern, Spanos and Gottlieb

Means ledger

Practice	Hands and knowledge	Hearth	Garden and still	Village dispensary	District infirmary	Hospital before the Fall
Written case log of a healer or midwife	Memory only, survivor bias wins	A book and ink: the Ballard method	Same, with a scale for doses	Shared register, outcomes counted by month	Compare healers and remedies by lot (PH-01 protocol 3)	Audit and vital statistics
Folk plant remedy, PH-01 grade C or better	Identify the plant	Tea, decoction or poultice at PH-01 dose	Weighed doses, tinctures, salves (ME-11)	Lay healer keeps stock and log	Small trial with stopping rules	Licensed extract
Foxglove-type potent plant	Do not use	Do not use	Only with ME-07's protocol and a scale	Trained healer, pulse chart	Doctor, pulse and urine output	Digoxin, levels
Charming and counter-witchcraft	Reassurance, which helps if no cure is missed	Same	Same	Healer asks "what else could this be" first	Same	Diagnosis
Abortifacient folk plants	No rung [OWNER]	No rung	No rung	No rung	Owner's ruling in MA-09	Not used
Purges	No rung	Rehydration instead (HY reports)	Same	Same	Same	Fluids

What each rung changes is mostly the denominator. A written log at the hearth turns a folk remedy from a story into a test. A district infirmary that allocates patients by lot can move a remedy from D to B within a year, as PH-01 describes for the Malian team (THRIVING library, PH-01).

Harm test

- **How folk medicine kills.** By poisoning from a potent plant at an untested dose, such as savin, tansy, hellebore, bryony, foxglove or thorn apple. By dehydration from purges. By the deaths of mothers and infants from abortifacients [OWNER] and from ergot in labour. By delay, as with the bewitched ague patient refused quinine. And by mistaken identity, such as foxglove for comfrey or white hellebore for gentian (PH-01, PH-10).
- **The dose that harms.** About 10 ml of pennyroyal oil (TR-15). Tansy oil, about half thujone, against PH-01's thujone limit of 6.0 mg a day. Foxglove at a therapeutic index of about 2 (ME-07). For savin no safe internal dose exists (Pereira 1854, Culpeper 1652).
- **Who must never receive a potent folk remedy.** Pregnant women (abortifacients, purges, tansy, rue, savin, pennyroyal). Infants (pennyroyal tea, ivy under 2 years, PH-01). The dehydrated (purges). The old with heart disease (foxglove).
- **Signs it is going wrong.** Vomiting and diarrhoea after a herbal dose. Confusion, a racing or very slow pulse, or yellow vision after foxglove. Jaundice or abdominal pain after pennyroyal or tansy. Bleeding and fever in

a woman who has taken an abortifacient [OWNER]. Convulsions after tansy or thujone plants. A dry, hot, flushed, confused patient after a nightshade.

- **What to do.** Stop the remedy. Keep the plant for identification. Give oral fluids if the patient can drink (rehydration, HY reports). Send to the highest rung reachable. Record the case in the village book.
- **Historical cases.** Those in sections 2 and 10, and Prescott's ergot deaths (MA-02).

Red flags

These are the signs that a patient being treated by a folk healer needs more than the folk healer has. - Any fever in a woman after childbirth or a miscarriage, or after taking any plant to bring on a period [OWNER]. - Heavy bleeding after birth that a rubbed womb does not stop (TR-14, MA-02). - Vomiting or diarrhoea after a herbal medicine, with dizziness or little urine. - Yellow eyes or skin after a herbal medicine. - A slow, irregular pulse or confusion in someone taking foxglove. - An illness the healer calls bewitchment that comes with fever, weight loss, a cough lasting more than three weeks, or a lump. - A "cure" that has been tried three times without effect while the patient worsens. - An infant given any herbal tea who becomes drowsy, vomits or stops feeding.

The case against

Against the feminist romance. Harley (1990), Briggs (1996) and the Survey of Scottish Witchcraft show that healers and midwives were a small minority of the accused. Green (2008) shows that the exclusion of women from medicine worked through texts and licences, not fire. The ergot-for-labour, belladonna and digitalis claims in Ehrenreich and English (1973) are either unsourced or turned the history upside down. The midwives' ergot killed infants.

Against the rationalist dismissal. The folk were first with smallpox inoculation, with cowpox, with the foxglove receipt, with ergot's effect on the womb and, for rickets, with cod liver oil. Ballard's maternal mortality was no worse than the United States' in 1930 (Ulrich 1990). Leong shows the household as a place of trial, and Bald's salve shows that a written receipt can hold a real effect for a thousand years. Aronson's judgement that folk uses reflect pharmacology only "by chance" is too strong for the top-ranked plants: nettle for rheumatism and comfrey for bruises match their PH-01 grades.

Against this report's own grading. Grade C rests on convergence between unrelated cultures. Much European folk use is not independent of the classical texts, because Culpeper and Gerard put Dioscorides into cottages (TR-01, Aronson 2005). A stricter reader would drop several European folk plants from C to D. And the Schools' Collection records belief, not outcome, so the "one in twenty" estimate measures agreement between belief and pharmacology, not benefit to patients.

Against the benchmarks. Ballard and Schrader were exceptional, and their records survived because they were, so the diaries are a ceiling, not a forecast. The Montevideo series comes from a poison centre and over-represents the women who became ill, so the true mortality among all users may be lower.

10-line summary

1. Folk healers were several trades: charmers, cunning folk, herb women, bonesetters, licensed midwives and household mistresses with receipt books.
2. Their medicine had a coherent logic of virtue, signature, planetary rule and the ill-wish, and treated mostly self-limiting complaints.
3. Cunning folk sold mostly inert herbs and charms for fees of up to £30. Their failures were blamed on stronger witchcraft, and their harms reached court rarely.
4. Culpeper and Gerard transmitted classical, not folk, medicine. Culpeper gave foxglove for epilepsy and copied Dioscorides on pennyroyal, but warned rightly against savin.

5. Genuine folk priority: smallpox inoculation (Wales, Constantinople), cowpox (Jesty 1774, Plett 1791), the foxglove receipt and ergot. Willow (Stone 1763) was learned, not folk.
6. Martha Ballard and Catharina Schrader kept counts: about 5 maternal deaths per 1,000 births.
7. The witch trials did not target healers: about 4 per cent of Scottish accused, under 1 per cent midwives. Exclusion came through literacy and licence (Green).
8. Ergot at Salem is not supported.
9. Five of the seven most cited Irish folk plants hold grade C or better for something, but only about one recorded use in twenty does [VERIFY].
10. Savin, tansy, pennyroyal, rue, hellebore, bryony and lead plaster killed. The book keeps the case log, the written receipt and PH-01's graded plants, and rejects the abortifacients [OWNER], the purges and bewitchment.

Open questions

- What fraction of Allen and Hatfield's recorded uses match a grade A to C use? No systematic cross-match was found.
- What did Davies 2003 find on fee scales and numbers of cunning folk per county? The book was not read.
- How many maternal deaths per 1,000 did unlettered village midwives have? No denominator exists for an unrecorded practice. Parish registers might give one.
- Is the Montevideo mortality of about 6 per cent typical of European folk abortifacient use in the nineteenth century? [OWNER]
- Was Bald's salve ever used, and did it help? No clinical record exists.

Sources to read in full

- Davies 2003, *Cunning-Folk*, for fees, numbers and failure.
- Harley 1990, the full article.
- Allen and Hatfield 2004, for the cross-match above. Hatfield 1999, *Memory, Wisdom and Healing*, and Vickery 1995, *A Dictionary of Plant-Lore*, were not read.
- Ulrich 1990 and the Ballard diary on DoHistory. Marland's 1987 translation of Schrader, *Mother and Child Were Saved*.
- Leong 2018, Spanos and Gottlieb 1976, Harrison et al. 2015.
- The Dúchas.ie Schools' Collection itself, county by county.

At the bedside after the Fall

Household. The household book is the wise woman's instrument. It needs a bound notebook, a pencil, a kitchen scale, PH-01's graded plants, and the rule that every remedy is written down with plant, part, quantity, time, patient and outcome. The first failure to expect is a remedy that seems to work on a self-limiting illness, such as a cold, a wart or a sprain, and is then trusted for a serious one, such as a fever after childbirth or a cough of three weeks. The second is a plant gathered from the hedge and taken for another (PH-01, PH-10).

Village of 300. A village of 300 will have, within a generation, its own lay healer, its own midwife and probably its own charmer. Expect about 8 to 10 births a year [VERIFY: my inference at a crude birth rate of 25 to 35 per 1,000]. Ballard delivered 814 in 27 years, about 30 a year, so a village midwife sees about a third of her load and will take a decade to deliver what Ballard delivered in three years. Her skill will grow more slowly, and one bad year will look like a pattern. What the village needs to start is one person who keeps the register, a midwife trained by TR-14's method, and a dispensary stock of PH-01 plants only. The first failure to expect is a healer who becomes a cunning man: who sees more patients than they can follow, who explains failure by an outside cause (the patient's sin, a neighbour's ill-will, a curse) and who charges for a second, dearer cure. The village must treat accusation as a red flag in its own right.

District of 3,000. A district of 3,000 can do what Withering did. It has enough patients with one complaint to test a remedy by lot (PH-01, protocol 3), enough births to count maternal deaths (about 90 to 100 births a year [VERIFY: same inference], three Ballards' worth), and enough literate people to keep a register across several villages. It needs a record-keeper and a rule that every healer in the district reports births, deaths and remedy trials each month. The first failure to expect is a plant found in Culpeper and in the folk record counted as two witnesses when it is one. The second is a striking success, like Stephens's stone cure, adopted on four cases.

Protocols

Protocol 1. Receiving a folk remedy into the village book 1. Write the claim in the words of the person who holds it: who, from where, from whom they learned it, and for what complaint. Name the source as SY-04 requires. 2. If the remedy is restricted by its holder (a charm whose words must not be told, or a gift that passes by rule), record only that it exists, who holds it and what it is for. Do not write down its content (SY-04, section 7). 3. Identify the plant by two features at least, and press a specimen in the book. Check it against PH-01's lookalike table. 4. Look it up in PH-01 and TR-15. If it is in TR-15 or graded X, stop. If it is an abortifacient, stop and refer to the owner's ruling in MA-09 [OWNER]. 5. Ask whether the complaint gets better on its own. If it does, the remedy needs a comparison before anyone believes it. 6. Give it only at PH-01's dose, weighed, and never above it. If PH-01 gives no dose, do not give it by mouth. 7. Record every use and every outcome: better, same, worse, died. Tolerance: no remedy is "proven" in the book before at least 20 recorded uses with outcomes [VERIFY: a working threshold of my own, not a sourced figure].

Protocol 2. The healer's case log (the Ballard method) 1. One line per patient visit: date, name, age, complaint, what was done, fee, outcome, and the date of the outcome. 2. For births: the date, the mother, the presentation, the length of labour, the sex and condition of the child at birth and at 7 days, and the mother's condition at 7 and 42 days [VERIFY: the 42-day window is the modern maternal death definition, not sourced here]. 3. Every month, count births, maternal deaths, stillbirths and infant deaths in the first week. Write the running rate per 1,000. 4. Tolerance: a maternal death rate above about 5 per 1,000, Ballard's and Schrader's level, means the practice needs review [VERIFY: a benchmark of my own].

Protocol 3. Testing a potent plant (Withering's method) Use ME-07 in full. Never take a potent plant's dose from Culpeper, Gerard or any folk informant. Take it only from ME-07 or PH-01, with the stopping rule written at the bedside.

Protocol 4. The fee and failure code 1. A healer charges for time and materials, not for a cure, and never charges more after a failure. 2. A healer who cannot explain an illness says so, and sends the patient up the ledger. 3. No healer names a person as the cause of an illness. 4. A remedy that has failed three times in the same patient is stopped.

Protocol 5. The keep and reject lists These are as set out in section 11. The village keeps them pinned inside the cover of the book.

Numbers to carry

1. About 4 per cent of 3,837 accused Scottish witches were healers, and 9 were recorded as midwives (Survey of Scottish Witchcraft).
2. About 2 per cent died after folk-style smallpox inoculation in Boston in 1721, against 14 per cent who caught it naturally (HY-10).
3. One maternal death in 198 living births: Martha Ballard, 1785 to 1812 (Ulrich 1990).
4. 4.6 maternal deaths per 1,000: Catharina Schrader, 1693 to 1745 (Dunn 2004).
5. 5 deaths and 23 abortions among 86 women who took plant infusions to end a pregnancy, Montevideo 1986 to 1999 (Ciganda and Laborde 2003) [OWNER].
6. About 10 ml of pennyroyal oil causes moderate to severe poisoning (TR-15).

7. Foxglove's therapeutic index is about 2 (ME-07).
8. Five of the seven most cited Irish folk plants hold grade C or better for some use, but about one recorded folk use in twenty does [VERIFY].
9. Grade C is right about one time in three, grade D about one in ten (TR-01).

References

1. Aronson J. 2005. Review of Allen DE and Hatfield G, *Medicinal Plants in Folk Tradition: an Ethnobotany of Britain and Ireland* (Timber Press 2004). *Medical History*, pp. 230-231. doi 10.1017/S002572730000870X. https://cambridge.org/core/services/aop-cambridge-core/content/view/6361B6422555373C28649931F005FC6B/S002572730000870Xa.pdf/david_e_allen_and_gabrielle_hatf (read in full. Volume and year not confirmed [VERIFY]).
2. Aronson J. 2017. Blog on savin (*Juniperus sabina*). *BMJ* Opinion. URL not retained (read through a search summary only [VERIFY]).
3. Ballard LM. 2009. An approach to traditional cures in Ulster. *Ulster Medical Journal* 78(1):26-33. https://pmc.ncbi.nlm.nih.gov/articles/PMC2629017 (read in full).
4. Bennett JH. 1841. *Treatise on the Oleum Jecoris Aselli, or Cod Liver Oil*. Reprinted in PMC. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5597366/ (search summary only).
5. BMJ. 1906. Plumbism from the ingestion of diachylon as an abortifacient. *British Medical Journal* 1:428. Also: A new abortifacient. *JAMA* 1892, 19(16):476. And: Lead as an abortifacient, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5205310/ (titles and search summaries only).
6. Briggs R. 1996. *Witches and Neighbours: the Social and Cultural Context of European Witchcraft*. HarperCollins. Read through the review in *Reviews in History*, no. 4. https://reviews.history.ac.uk/review/4-2 (review only).
7. Caporael LR. 1976. Ergotism: the Satan loosed in Salem? *Science* 192:21-26. https://pubmed.ncbi.nlm.nih.gov/769159/ (abstract only).
8. Ciganda C and Laborde A. 2003. Herbal infusions used for induced abortion. *Journal of Toxicology: Clinical Toxicology* 41(3):235-239. https://pubmed.ncbi.nlm.nih.gov/12807304/ (abstract and summaries only).
9. Culpeper N. 1652. *The English Physician* (as *Culpeper's Complete Herbal*, a nineteenth-century edition). Project Gutenberg 49513. https://www.gutenberg.org/cache/epub/49513/pg49513.txt (entries for foxglove, hellebore, savin, pennyroyal, comfrey and willow read).
10. Davies O. 1999. Cunning-folk in the medical market-place during the nineteenth century. *Medical History* 43:55-73. https://uhra.herts.ac.uk/id/eprint/3509/1/906672.pdf (read in full).
11. Davies O. 2003. *Cunning-Folk: Popular Magic in English History*. Hambledon and London. Read through the review by DE Cohen. https://decohen.com/reviews/cunning-folk-popular-magic-in-english-history/ (review only).
12. Dunn PM. 2004. Catharina Schrader (1656-1746) of Friesland: an eminent midwife. *Archives of Disease in Childhood Fetal and Neonatal Edition* 89:F560. https://fn.bmj.com/content/89/6/F560 (search summary only, the page refused access).
13. Edward Worth Library. John Gerard. https://botany.edwardworthlibrary.ie/herbals/seventeenth-century/john-gerard/ (read).
14. Ehrenreich B and English D. 1973. *Witches, Midwives and Nurses: a History of Women Healers*. Feminist Press. https://www.marxists.org/subject/women/authors/ehrenreich-barbara/witches.htm (read).
15. Evenden D. 2000. *The Midwives of Seventeenth-Century London*. Cambridge University Press. https://muse.jhu.edu/article/180569 (publisher description and review only).
16. Forbes TR. 1962. Midwifery and witchcraft. *Journal of the History of Medicine and Allied Sciences* 17. Not read, cited through Harley.
17. Fox J and Brazier M. 2024. Midwives' oaths: everyday life and the law in seventeenth-century England. *Continuity and Change*. https://research.edgehill.ac.uk/en/publications/midwives-oaths-everyday-life-and-the-law-

in-seventeenth-century-e/ (listing and search summary only. Authors' initials [VERIFY]).
18. Goddard J. Joanna Stephens. British Association of Urological Surgeons, Museum. https://www.baus.org.uk/_userfiles/pages/files/museum/12-joanne-stephens.pdf (read).
19. Green MH. 2008. *Making Women's Medicine Masculine: the Rise of Male Authority in Pre-Modern Gynaecology*. Oxford University Press. Publisher description and table of contents only.
20. Harley D. 1990. Historians as demonologists: the myth of the midwife-witch. *Social History of Medicine* 3(1):1-26. doi 10.1093/shm/3.1.1 (bibliographic details and secondary summaries only).
21. Harrison F, Roberts AEL, Gabrilska R, Rumbaugh KP, Lee C and Diggle SP. 2015. A 1,000-year-old antimicrobial remedy with antistaphylococcal activity. *mBio*. Read through the University of Nottingham press page. https://www.nottingham.ac.uk/research/groups/medieval/news-events/events/ancientbiotics.aspx (press releases only. Author list [VERIFY]).
22. Hektoen International. 2020. Lady Mary Wortley Montagu and smallpox. https://hekint.org/2020/07/13/lady-mary-wortley-montagu-and-smallpox/ (read).
23. JECFA (Joint FAO/WHO Expert Committee on Food Additives). 1981. Tansy. WHO Food Additives Series 16. https://inchem.org/documents/jecfa/jecmono/v16je25.htm (read. Year [VERIFY]).
24. Koay A, Shannon F, Sasse A, Heinrich M and Sheridan H. 2020. Exploring the Irish National Folklore Collection for plant-based remedies. *Frontiers in Pharmacology*. https://www.frontiersin.org/journals/pharmacology/articles/10.3389/fphar.2020.584595/full (read. Exact title and author list [VERIFY]).
25. Leong E. 2018. *Recipes and Everyday Knowledge: Medicine, Science and the Household in Early Modern England*. University of Chicago Press. https://www.press.uchicago.edu/ucp/books/book/chicago/R/bo28911252.html (publisher summary and a review only).
26. Levack BP. *The Witch-Hunt in Early Modern Europe*, 3rd edition. Longman. Read through the review in Project MUSE. https://muse.jhu.edu/article/236499/pdf (review only).
27. Linda Hall Library. 2023. Nicholas Culpeper, Scientist of the Day. https://www.lindahall.org/about/news/scientist-of-the-day/nicholas-culpeper/ (read).
28. O'Bríon et al. 2021. Poster on Irish folk medicine in the Schools' Collection. *Planta Medica*. https://www.thieme-connect.de/products/ejournals/html/10.1055/s-0041-1736925 (search summary only, the page refused access).
29. Pead PJ. 2003. Benjamin Jesty: new light in the dawn of vaccination. *The Lancet* 362:2104-2109. Read with Wikipedia, Benjamin Jesty. https://en.wikipedia.org/wiki/Benjamin_Jesty (secondary summaries only. Volume and pages [VERIFY]).
30. Percival T. 1783. Observations on the medicinal uses of the Oleum Jecoris Aselli, or cod liver oil. *London Medical Journal*. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5550158/ (search summary only).
31. Pereira J. 1854. *The Elements of Materia Medica and Therapeutics*, Juniperus sabina. https://henriettes-herb.com/eclectic/pereira/juniperus-sabi.html (read).
32. Pierpoint WS. 1997. Edward Stone (1702-1768) and Edmund Stone (1700-1768): confused identities resolved. *Notes and Records of the Royal Society* 51(2):211-217. https://repository.rothamsted.ac.uk/id/eprint/8804/1/rsnr.1997.0018.pdf (read in full).
33. Pieroni A, Pardo-de-Santayana M, Firenzuoli F and Quave CL. 2013. The European heritage of folk medicines and medicinal foods: its contribution to the CAMs of tomorrow. *Evidence-Based Complementary and Alternative Medicine* 827521. https://pmc.ncbi.nlm.nih.gov/articles/PMC3638603/ (read in part. Exact title [VERIFY]). Pieroni's field surveys of Peshkopia, the Kosovar Albanian Alps, the Upper Reka valley and the Varaita valley were seen only as search summaries.
34. Ring et al. 2024. Healers and midwives accused of witchcraft (1563-1736): what secondary analysis of the Scottish Survey of Witchcraft can contribute to the teaching of nursing and midwifery history. *Nurse Education Today*. https://napier-repository.worktribe.com/output/3367274/healers-and-midwives-accused-

of-witchcraft-1563-1736-what-secondary-analysis-of-the-scottish-survey-of-witchcraft-can-contribute-to-the-teaching-of-nursing-and-midwifery-history (abstract and press summary only).
35. Salem Witch Museum. 2023. Debunking the moldy bread theory. https://salemwitchmuseum.com/2023/05/17/debunking-the-moldy-bread-theory/ (read).
36. Shannon F. 2022. Irish folk medicine in the Schools' Collection, Wexford and Roscommon. PhD thesis, Trinity College Dublin. https://www.tara.tcd.ie/items/fe64cba2-7a4c-4477-8aae-dc1237fe2129 (abstract only through a search summary, the page refused access).
37. Sidky H. 1997. *Witchcraft, Lycanthropy, Drugs and Disease*. Peter Lang. Search summary only.
38. Sõukand R, Pieroni A and others. 2023. Two thousand years of Central European plant use. *Plants* 12(1):135. https://www.mdpi.com/2223-7747/12/1/135 (search summary only, the page refused access. Authorship and title [VERIFY]).
39. Spanos NP and Gottlieb J. 1976. Ergotism and the Salem village witch trials. *Science* 194:1390-1394. Secondary summaries only [VERIFY pages].
40. Stone E. 1763. An account of the success of the bark of the willow in the cure of agues. *Philosophical Transactions of the Royal Society* 53:195-200. https://jimclifford.ca/philosophical-transactions-ocr-1665-1869/articles/jstor-105721/ (OCR text read).
41. Survey of Scottish Witchcraft. Frequently asked questions. University of Edinburgh. https://ssw.mdss-preproduction.efi.ed.ac.uk/faq/ (read).
42. Midwives of Old. Undated article in PubMed Central. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5236681/ (search summary only, for Bonner's injunction of 1554 and the oath. Author and year [VERIFY]).
43. Timonius E. 1714. An account, or history, of the procuring the small pox by incision, or inoculation. *Philosophical Transactions* 29:72-82. Bibliographic details only.
44. Ulrich LT. 1990. *A Midwife's Tale: the Life of Martha Ballard, Based on Her Diary, 1785-1812*. Knopf. Chapter 5 read on DoHistory. https://dohistory.org/book/100_chapter5_txt.html (read).
45. University of Essex. 2024. What is a witch? 60 Stories. https://60stories.essex.ac.uk/what-is-a-witch (read. Year [VERIFY]).
46. Wikipedia. John Gerard. https://en.wikipedia.org/wiki/John_Gerard (read). Nicholas Culpeper. https://en.wikipedia.org/wiki/Nicholas_Culpeper (read). Peter Plett. https://en.wikipedia.org/wiki/Peter_Plett (read).
47. Williams P. 1722. Part of a letter to Dr Samuel Brady concerning the practice of inoculating the small pox in Wales. *Philosophical Transactions* 32. https://jimclifford.ca/philosophical-transactions-ocr-1665-1869/articles/jstor-103612/ and https://jimclifford.ca/philosophical-transactions-ocr-1665-1869/articles/jstor-103613/ (OCR text read).
48. THRIVING library reports cited: PH-01, PH-10, TR-01, TR-13, TR-14, TR-15, ME-07, ME-11, MA-02, HY-10, SY-04 (read in the library folder).