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Rehabilitation Potential as a Social Judgement

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Abstract

'Rehabilitation potential' is among the quieter categories of contemporary clinical practice. It appears in referral criteria, admission decisions and discharge planning as a technical estimate of how much function a patient might regain. This article argues that, applied to older people, it operates instead as a social judgement, and that the judgement long predates the vocabulary in which it is now expressed. Reading rehabilitation through the critical medical humanities, we trace practices directed at restoring function in later life from Greco-Roman antiquity, Ayurvedic Jara Chikitsa, Chinese tonification regimens and the Islamic bimaristan, through the medieval European almshouse and the Enlightenment hospital, to the geriatric units of the post-war welfare state. Across these settings the material provision of care varied enormously; the mechanism governing access did not. Societies restored older bodies to the extent that they judged those bodies worth restoring, and expressed that judgement in whichever idiom was locally authoritative, humoral, theological, actuarial and now diagnostic. We identify three properties that allow the judgement to pass as a measurement: it is comparative, it is prospective, and it is self-confirming, since withholding rehabilitation produces the deterioration that retrospectively justifies the refusal. Naming these properties has consequences for practice. It shows why better prognostic instruments cannot correct the category from within, and why access to later-life rehabilitation requires the rights-based footing now taking shape in international law.

Introduction: The Judgement Before the Therapy

In 1935 Marjory Warren, a surgeon by training and deputy medical superintendent of the West Middlesex County Hospital, assumed responsibility for several hundred patients transferred from the adjoining Poor Law infirmary. Most were old. Many had lain in bed for years without a diagnosis, a physical examination or any expectation that their condition might alter. The wards were, in the administrative language of the day, chronic wards, and the adjective carried a prognosis of its own. Warren examined the patients individually, classified them, mobilised them and discharged a substantial proportion to their own homes or to less intensive settings (Warren 1943, 1946; Matthews 1984; St. John and Hogan 2014). What she demonstrated was not a new therapy. Nothing in her method required equipment or pharmacology unavailable a decade earlier. What she overturned was a judgement: that these particular bodies were not worth the effort.

That judgement is the subject of this article. In contemporary practice it has a name. 'Rehabilitation potential' appears in referral criteria, admission policies, funding rules and discharge decisions as an estimate of the functional gain a patient may reasonably be expected to achieve. Presented in this way it looks like a prognostic variable, of the same order as an ejection fraction or a creatinine clearance. We argue that, applied to older people, it is better understood as a social judgement wearing clinical dress, and that the dress has been changed several times while the judgement beneath it has remained recognisably the same.

Two literatures bear on the problem and have rarely been brought into sustained conversation. Historians of medical rehabilitation have traced the genesis of the modern Western field from the late nineteenth century, identifying the world wars, industrial accidents and advances in physical medicine as the formative episodes (Stiker 1999; Cooter 1993; Linker 2011). Scholarship on the history of ageing and geriatric medicine has shown, separately, how old age came to be constituted as a singular medical and social problem in the context of demographic transition and welfare-state politics (Thane 2000). Read together, they yield something neither offers alone: that the selection criteria of later-life rehabilitation have consistently encoded a prior estimate of social worth, and that the estimate has survived every reformulation of the clinical vocabulary in which it is expressed.

Our approach follows the critical medical humanities, which Anne Whitehead and Angela Woods describe as a set of intersections and entanglements between the biomedical sciences, the arts and humanities and the social sciences, and which is characterised less by the humanising of clinical practice than by a willingness to interrogate the categories through which clinical practice organises the world (Whitehead and Woods 2016). Applied here, that commitment means treating 'rehabilitation potential' as an object of analysis rather than an instrument of measurement, and asking what work the category has done, for whom, and at whose expense.

Nor is the question merely historical. Population ageing across much of the world has drawn attention to rehabilitation as a means of reducing dependence, shortening hospital stays and lowering the costs of long-term care (World Health Organization 2017). Debates about equitable access presuppose that older people will benefit equally from any expansion of provision, without yet reckoning fully with the histories of exclusion shaped by age thresholds and productivity norms (United Nations 2002). If the category that governs entry to rehabilitation is a judgement rather than a measurement, then expanding provision without examining the category will reproduce the pattern it was intended to remedy.

Our evidence comes from medical treatises, religious and charitable records, early hospital casebooks, legal and policy documents and, where available, patient testimony. The focus falls primarily on Europe and North America, with examples drawn from elsewhere to identify alternative paths and circulations of rehabilitative practice. Our aim is not a global survey. It is to establish a genealogy for a category still in daily use, and to specify what kind of thing that category is.

What Kind of Judgement?

The term 'rehabilitation' has undergone considerable evolution. Medical rehabilitation is today an integrated process designed to maximise functioning and minimise disability and social disadvantage after illness or injury, delivered through multidisciplinary programmes (World Health Organization 2011). Earlier definitions were less precise and were often conflated with convalescence, physiotherapeutic treatment or moral reform (Anderson 1964). We use 'rehabilitation' heuristically, to refer to practices directed, explicitly or implicitly, towards restoring or enhancing functional capacity and reintegrating individuals into social life after bodily or cognitive incapacity. The heuristic is deliberately wide, because

narrowing it to the modern multidisciplinary programme would concede in advance the point at issue, namely that the practice begins where the professional specialty begins.

'Old age' is likewise treated as a social and cultural construction rather than a fixed biological fact. Following critical and cultural gerontology, we take chronological age to be less a natural boundary than a category continually produced and reworked through medical discourse, law and everyday meaning-making. Ancient writers and early modern moralists described ageing in terms of reduced heat, moisture or strength, with chronological thresholds that differed widely. Contemporary welfare systems have typically constructed 'old age' around statutory retirement ages or pension eligibility (Laslett 1989). Throughout the analysis, older adults are defined as those whom their contemporaries considered to be in the later stages of life and whose eligibility for certain forms of care or work was tied to that designation.

By a social judgement we do not mean an individual prejudice. Prejudice is held by persons and can in principle be corrected by educating them. What concerns us here is distributed, institutionalised and reproduced through eligibility rules, admission statutes, insurance schedules and referral criteria, which is to say through documents that continue to operate whatever the beliefs of the practitioners who apply them. Three properties allow such a judgement to pass as a measurement, and they recur across every setting examined below.

The judgement is, first, comparative. It is never made about a patient in isolation but about a patient relative to other claimants on a finite stock of beds, therapist hours and charitable funds. The question actually posed is not whether this older person could improve but whether improving this person is the best available use of the resource. Because the comparison is conducted in the language of individual prognosis, the rationing decision disappears into a statement about the patient's body.

The judgement is, second, prospective. It concerns not what the patient is but what the patient will subsequently be able to do, and it therefore imports whatever a given society counts as doing something worthwhile. In Rome that meant public life, in the almshouse prayer and light labour, in the industrial clinic a return to the wage. The apparent constancy of the clinical question conceals the variability of the social answer.

The judgement is, third, self-confirming. Withholding rehabilitation from an older person produces deconditioning, contracture, dependence and loss of confidence, which are then observed and recorded as evidence that the person lacked potential in the first place. No falsification is possible from within the practice, because the prediction of a poor outcome brings about the conditions of its own verification. This last property is the most consequential and the least often stated, and it goes some way towards explaining why the category has proved so durable across otherwise unrelated medical systems.

From here the argument proceeds through comparative cases. Sources for antiquity and the medieval period are chiefly normative texts, among them medical treatises, monastic regulations and charitable statutes, which must be read with care, as they often embody ideals rather than everyday practice. For

the nineteenth and twentieth centuries, hospital and insurance records offer access to older people's experiences, including refusals of care and formal determinations of restorability (Pickstone 2000). The narrative moves in broad chronological sections: the ancient and late antique worlds; non-European traditions; medieval and early modern Europe; the long nineteenth century; the rise of geriatric medicine; and contemporary models. At each stage we ask in what idiom the judgement was expressed, and what a body had to promise in order to be worth restoring.

Antiquity: Worth as Public Standing

Practices recognisable as rehabilitative appear across many pre-modern traditions, yet access was always conditioned by status, gender and institutional priorities (Table 1).

Table 1

Conceptualisations of old age and rehabilitation goals by period, antiquity to the twenty-first century.

Sources: Antiquity: Nutton (2004); Porter (1997). Egypt: Nunn (1996). India: Wujastyk (2003); Pole (2006). China: Huang Di (2011); Kaptchuk (1983). Islamic world: Dols (1987); Ibn Sina (1973). Americas: Sahagún (1961); Verano (2016); Murra (1995). Africa and Australasia: Mbiti (1990). Medieval: Rawcliffe (2013); Siraisi (1990). Early modern: Porter (1982); Thane (2000). Nineteenth century: Cooter (1993). Twentieth century to present: Ellis et al. (2011); Stuck et al. (1993).

Period or civilisation	Dominant view of old age	Typical rehabilitation goal	Primary institutions
Antiquity (Greece, Rome)	Natural cooling and weakening; elite male focus	Maintain vigour of elite men; prevent decline	Private households, gymnasia, military facilities
Ancient Egypt (c. 1600–300 BCE)	Decline as natural process; frailty with spiritual significance	Manage injury and functional loss; fulfil ritual duty	Temple estates, household, priestly networks
Classical India (c. 500 BCE–500 CE)	Ageing as doshic imbalance; old age a stage of renunciation	Restore bodily tissues; prolong function via Rasayana	Ayurvedic physicians, household, ashrams
Classical China (c. 200 BCE–1850 CE)	Decline of kidney qi through successive decades	Tonify waning organ systems; maintain filial participation	Household (filial piety), imperial physicians, monasteries
Islamic world (700–1500 CE)	Coldness and dryness requiring regimen; frailty as social responsibility	Full recovery regardless of status; graded exercise and diet	Bimaristan (hospital), court physicians
Pre-Columbian Americas (c. 500–1500 CE)	Sacred and productive body; age as civic exemption	Repair trauma; restore function; welfare provision for the infirm	State storehouses (Inca), titicih physicians (Aztec)
Indigenous Africa and Australasia (ongoing)	Illness as relational disruption; elder as spiritual authority	Restore social, physical and spiritual function	Community healers (sangoma, Ngangkari), extended family
Medieval Europe (c. 500–1500 CE)	Spiritual trial; frailty as pathway to salvation	Preserve basic self-care for prayer and light labour	Monasteries, hospitals, confraternities
Early modern period (c. 1500–1800)	Moralised life-course; old age of poor as social problem	Maintain ability to work in crafts or agriculture	Parish poor relief, poorhouses, workhouses
Long nineteenth century	'Unproductive' older poor; valued older skilled workers	Return selected older workers to employment; reduce poor-relief costs	Insurance funds, industrial clinics, military hospitals
Twentieth century to present	Ageing as medical and demographic problem; heterogeneity emphasised	Optimise function, prevent dependency, support self-determined living	Geriatric wards, rehabilitation centres, community services

The earliest Western discussions of ageing and bodily decline emerged in medical and philosophical traditions that described the life course in humoral and cosmological terms. In classical Greek and

Roman medicine the ageing body was understood as progressively colder and drier, its 'innate heat' waning. Therapies for older people therefore aimed less at cure than at managing decline through diet, moderate exercise, bathing and massage intended to preserve residual strength and delay disability. Walking regimens, passive movements, manual therapies and graded physical activity resemble low-intensity rehabilitation, though they were never labelled as such (Conti 2014).

Hippocratic writings associated old age with diminished warmth and moisture, recommending warm baths, oily applications and light, frequent meals (Hippocrates 1931). Celsus, in his De medicina, emphasised graduated exercise, rubbing and water treatments to support recovery after illness and injury, adjusting regimes to age and season (Celsus 1935). Galen prescribed structured regimens of diet, exercise, massage and bathing calibrated to the declining faculties of older people, and particularly of elite men (Galen 2018).

That final qualification carries the argument. Access to such care was sharply stratified. Literary and medical evidence suggests that the full elaboration of these regimens was generally reserved for male elites, whose continued participation in public life made their bodies socially valuable. Wealthy older men might employ household slaves or paid attendants to assist with exercise, bathing and massage, in effect assembling an informal rehabilitation team (Nutton 2004). Older labourers, freedmen and enslaved people appear chiefly in the background of the sources, their injuries and frailty managed through replacement or abandonment rather than sustained care. In Roman military contexts, older or chronically impaired veterans were frequently discharged with limited support once their usefulness had ended (Nutton 2004). The physiological theory was identical in both cases. Applied to bodies of differing social value it produced regimen for one and disposal for the other, which is the comparative property in its plainest form.

Healing cults dedicated to Asclepius and Serapis welcomed supplicants of various ages, who sought dream-cures, ritual incubation and symbolic treatments within temple complexes that sometimes functioned as proto-hospitals. Inscriptions and votive offerings suggest that some older worshippers experienced improved mobility or relief from chronic pain. These cults created communal spaces in which disabled and older bodies were visible, legitimised and partially reintegrated through shared ritual (Edelstein and Edelstein 1998). The transition from late antiquity to the Christian Middle Ages introduced new moral languages for interpreting ageing. Early Christian communities established xenodochia and ptochotrophia, houses for strangers and the poor, which sheltered older and disabled persons alongside other vulnerable groups. Some Byzantine and Western sources refer explicitly to gerontokomia, homes for older adults, in which spiritual and material provision were integrated (Miller 1985). The criterion of worth had begun to shift from civic standing towards spiritual status, but a criterion there remained.

Beyond the Mediterranean: Other Criteria, the Same Mechanism

Ancient Egypt

Surviving medical papyri from ancient Egypt offer the earliest documentary evidence of systematic approaches to bodily injury and functional impairment. The Edwin Smith Papyrus (c.1600 BCE), a surgical case manual organised anatomically from the head downward, presents forty-eight case descriptions with diagnoses, prognoses and treatments for traumatic injuries, including fractures, dislocations and wounds, classified according to whether they were treatable, contestable or untreatable (Breasted 1930). That tripartite classification deserves notice. It is among the earliest surviving instruments for sorting bodies by the effort they warrant, and it is organised, like its modern descendants, around the anticipated result rather than the present condition. The Ebers Papyrus (c.1550 BCE) is the most extensive surviving Egyptian medical document, cataloguing over seven hundred remedies for conditions ranging from internal diseases to ophthalmological complaints and the ailments of old age, among them treatments for joint stiffness, urinary difficulties and sensory decline (Ebbell 1937). Together the two papyri suggest that Egyptian practice encompassed a pragmatic surgical tradition concerned with restoring function after injury and a pharmacological tradition addressing chronic conditions associated with advancing age (Nunn 1996). Social provision for older adults was embedded in household economy and religious obligation: temple estates supplied retired craftsmen and priests with sustenance, and Old Kingdom tomb inscriptions frequently record that the deceased had cared for the aged or given bread to the hungry (Breasted 1930).

Classical India: Jara Chikitsa and Rasayana

Among the great ancient medical traditions, Ayurveda is unique in according geriatrics the status of a formal discipline. The classical Sanskrit texts of the Charaka Samhita and the Sushruta Samhita, codified between the first century BCE and the fifth century CE, enumerate eight branches (Ashtanga Ayurveda), the seventh of which is Jara Chikitsa, the medicine of old age (Wujastyk 2003). The closely related branch of Rasayana Chikitsa, usually translated as rejuvenation therapy, offered a systematic programme for restoring the seven bodily tissues, strengthening immunity and retarding the deterioration associated with advancing age (Pole 2006). The Charaka Samhita defines the ideal outcome as longevity, intelligence, youthfulness, lustre, physical development and clarity of the senses, a remarkably comprehensive statement of rehabilitation aims (Sharma and Dash 2009). Modern researchers have identified anti-inflammatory and immunomodulatory mechanisms in classical Rasayana herbs, including ashwagandha and guduchi, lending retrospective pharmacological plausibility to practices developed more than two millennia ago (Bhattacharya et al. 2000). Here the prospective property is unusually visible. What the regimen promised to restore was not the capacity to labour but the capacity to pursue the goals proper to the later stages of life, and the therapeutic ambition expands accordingly.

Classical China: Kidney Qi, Filial Piety and the Ageing Body

Chinese medicine's engagement with ageing is at least as old as its Indian counterpart. The Huangdi Neijing, compiled from older materials during the Warring States and Han periods, contains systematic

discussion of the physiological changes that accompany advancing age (Huang Di 2011). In its Suwen section, successive decades of life are described in terms of the waxing and waning of kidney qi, with direct therapeutic implications: physicians were expected to tonify declining organ systems through acupuncture, dietary prescription, herbal decoction and the therapeutic exercises of qi gong and, later, tai chi (Kaptchuk 1983). The social organisation of care for older adults in imperial China was shaped above all by the Confucian doctrine of filial piety, codified in the Classic of Filial Piety and reinforced through dynastic law codes that imposed criminal penalties for the neglect or mistreatment of parents (Classic of Filial Piety 1879). The concept of preventive cure (zhi wei bing) represents the closest Chinese parallel to modern prehabilitation programmes (Unschuld 2003). The Chinese case is instructive precisely because the criterion of eligibility was neither status nor productivity but kinship obligation, enforceable at law. The mechanism we describe is general; its content is culturally specific, and can in principle be set so that older people qualify by virtue of being older rather than in spite of it.

The Islamic World: The Bimaristan and Older Infirm Adults

The medieval Islamic world produced the most institutionally developed system of care for older and functionally impaired adults in the pre-modern world outside East Asia. The bimaristan emerged as a multi-function healthcare centre combining an acute hospital, a convalescent home, a pharmacy, a medical school and, explicitly, a retirement home for those aged and infirm who lacked a family to care for them (Dols 1987). The earliest Islamic institution for the sick, a leprosarium established in Damascus under the Umayyad caliph al-Walid I around 707 CE, was a modest precursor. The first fully developed bimaristan was founded in Baghdad during the reign of Harun al-Rashid in the early ninth century, and by the tenth century such hospitals could be found across the Islamic world, from Cairo to the Persian lands and al-Andalus (Dols 1987). The founding statute of the bimaristan of al-Mansur Qalawun in Cairo (c.1284 CE) specified that it would receive all patients, men and women, until they were completely recovered, with all costs borne by the institution irrespective of origin or economic status (Hamarneh 1971). The formula repays attention, because it is a deliberate refusal of the comparative property. Entitlement is stated without reference to the claimant's standing or to competing claims, which is close to what a rights-based framework would later attempt in secular terms, and which had no institutional parallel in Western Europe until the late nineteenth century.

Ibn Sina's Canon of medicine (completed c.1025 CE), which codified and systematised much of the knowledge already applied in the bimaristans, became the pre-eminent authority in both the Islamic world and in European universities, where its Latin translation remained a standard teaching text into the late seventeenth century (Ibn Sina 1973). Book I of the Canon prescribes progressive exercise, gentle in the morning and increasing gradually, together with massage, bathing and dietary adjustment to counteract the coldness and dryness of advanced age. Exercise, Ibn Sina argued, had to be calibrated to the patient's physical condition, with weak organs protected from intensive effort, a principle of personalised exercise prescription now foundational to geriatric physiotherapy (Ibn Sina 1973). The Ottoman Sultan Bayezid II Hospital at Edirne, completed in 1488, extended this framework to include

music therapy, aromatherapy and hydrotherapy as components of treatment for physically deconditioned older adults (Shefer-Mossensohn 2009).

The Pre-Columbian Americas

Pre-Columbian American civilisations developed sophisticated medical knowledge, though the destruction of codices during the Spanish conquest means that much can only be reconstructed from the surviving Aztec Badianus Codex of 1552, the accounts of Fray Bernardino de Sahagún and palaeopathological evidence from skeletal remains (Ortiz de Montellano 1990). Aztec medicine was practised by specialist physicians called titicih, who combined empirical pharmacological knowledge with cosmological reasoning structured around the cold and warm polarity (Sahagún 1961). Their pharmacopoeia included analgesic and anti-inflammatory plant preparations that modern phytochemical research has partially confirmed (Ortiz de Montellano 1990). The most striking evidence of systematic functional recovery comes from Andean palaeosurgery: cranial trepanation was performed across successive Andean cultures, from the Paracas and Nazca to the Inca, with approximately eighty per cent of trepanned skulls showing evidence of bone healing. Gold and silver cranioplasty plates recovered from some skulls represent an early instance of prosthetic rehabilitation (Verano 2016). Within the Inca state, the category of the old and infirm, purej puriq, literally those who cannot walk to work, received food allocations from state storehouses, a welfare provision without direct parallel in contemporary European societies until the Elizabethan Poor Law of 1601 (Murra 1995). The Quechua term names the criterion outright. Eligibility for support was defined by the loss of the capacity to labour, which is the same criterion that would organise nineteenth-century European accident insurance, though here it triggered provision rather than exclusion.

Africa and Australasia: Healing, Elders and Community Continuity

African traditional medicine is among the oldest continuously practised healing systems in the world, embedded in cosmological frameworks that view illness as a disruption of the relationships between the individual, the community, the ancestors and the natural world (Mbiti 1990). Specialist healers, among them the sangoma, nganga and n'anga, combined herbalism, ritual and manual therapy in interventions directed at restoring social and physical function (Ngubane 1977). Elders occupied a particularly charged position in many African medical systems: as repositories of ancestral knowledge, their physical frailty carried spiritual significance, and their care was a community responsibility with cosmological as well as social dimensions (Mbiti 1990).

In Aboriginal Australia, the Ngangkari of the Anangu people are traditional healers whose knowledge has been formally recognised by the South Australian Government and integrated into contemporary health services, including hospitals and nursing homes (Oliver 2013). The Ngangkari practise a form of rehabilitation that is at once physical, treating the body through plant medicines and manual therapy, relational, restoring the patient's bonds with community and country, and spiritual, retrieving displaced

elements of the person's inner self (Panzironi 2013). For older Aboriginal patients, connection to country operates as a therapeutic goal in its own right, acknowledged within the framework of Australian aged-care policy (Australian Government Department of Health and Aged Care 2025). Where the accumulated experience of a long life is itself the socially valued good, the prospective property works in older people's favour, and provision follows.

Medieval and Early Modern Europe: Maintenance without Restoration

Medieval hospitals and almshouses in Western Europe extended and diversified the custodial arrangements of late antiquity. Founded by bishops, monastic houses, confraternities or urban elites, they admitted a heterogeneous population of the deserving poor, among them widows, chronic invalids, blind priests and older servants. Studies of English and continental institutions reveal that a growing proportion of residents were older adults, some admitted after chronic illness or injury and others simply on account of age-related frailty (Rawcliffe 2013; Horden 1988). Regulations commonly required residents to attend religious services, obey curfews and, where possible, contribute to household work such as kitchen labour, cleaning or craft production. For those capable of such tasks, participation may have functioned as an informal rehabilitative measure, preserving strength, coordination and a sense of usefulness, though contemporaries did not articulate it in biomedical terms.

Most hospitals and almshouses were designed as end-points rather than as transitional institutions. Entry often entailed the renunciation of property and the expectation of remaining until death (Orme and Webster 1995). Some residents undoubtedly experienced improvements in health and function through regular food, shelter and nursing, yet there was little structural incentive to invest resources in restoring them to independent living, particularly when beds and charitable funds were scarce. Institutional statutes often codified hierarchies among residents, privileging clerics, benefactors' retainers or respectable older poor over itinerants or those with stigmatised conditions such as leprosy or mental illness. Those statutes are, in effect, the earliest written eligibility criteria for restorative care in the European record, though their currency is moral standing rather than functional prognosis.

There were, nonetheless, pockets of proto-rehabilitative thinking. Some monastic rules encouraged brothers and sisters with chronic disabilities or advanced age to remain engaged in the community through appropriately adjusted work, for example copying manuscripts, tending gardens or performing intercessory prayer, which preserved social roles and daily rhythms in spite of physical limitations (Benedict of Nursia 1972; Harvey 1993). Late medieval surgical and medical texts offered pragmatic guidance on managing fractures, joint disease and paralysis among older patients, sometimes acknowledging that, while full recovery was unlikely, careful splinting, massage and cautious mobilisation could improve function and comfort (Siraisi 1990; Demaitre 2013). Such measures anticipated later rehabilitative principles of graded activity and prevention of complications, even in the absence of systematic organisation or a dedicated institutional framework. The dominant teleology of care for older adults nevertheless remained oriented towards maintenance and salvation rather than reintegration into independent or productive roles (Demaitre 2013).

The Enlightenment: Curability as an Ancestor

The medieval framework of care, comprising almshouses, monastic infirmaries and religious hospitals, had been guided principally by charity, spiritual credit and the mitigation of suffering. The eighteenth century overlaid this inheritance with the conviction that the human body was malleable, a system amenable to rational investigation and deliberate improvement. Older habits of thought were not displaced overnight, and parish relief and the labour of kin remained the principal safety net. For older people a naturalistic framing of ageing opened pathways to intervention through diet, exercise and regimen, while the same rationalist ethos imposed exacting standards of bodily utility against which ageing bodies were frequently judged wanting.

Roy Porter warned that there was never a uniform medical Enlightenment, but rather a pluralistic period of competing paradigms and therapeutic cultures (Porter 1982). Even so, medical writers increasingly grounded their understanding of health and disease in observation rather than in Scripture or scholastic authority, and the implication for ageing was direct. If illness arose from identifiable physical causes, the infirmities of old age might likewise be subject to rational analysis and mitigation.

Nowhere is the shift plainer than in the work of Samuel-Auguste Tissot (1728 to 1797), a physician of Lausanne whose Avis au peuple sur sa santé of 1761 was addressed to a lay readership (Emch-Dériaz 1992). Tissot called for the careful regulation of diet, sleep, exercise and sexual behaviour, the old non-naturals of Galenic medicine, but discussed them in the idiom of rational self-management rather than of ecclesiastical discipline (Tissot 1761). Where earlier writers had seen in old age an inevitable march towards dissolution, eighteenth-century physicians increasingly held that regimen might slow it (Porter 1997). The ageing body had ceased to be something merely waiting for death. It had become a field for management and, within limits, for improvement.

These developments in medical thought ran in parallel with changes in institutional care. The voluntary hospital movement in England, gathering pace from the 1720s, expressed the Enlightenment's blend of philanthropic sentiment with secular rationalism. Unlike their medieval predecessors, the new foundations, among them Westminster (1720), Guy's (1724) and St George's (1733), drew their income from public subscription by commercial and professional elites who regarded the relief of suffering as a social duty amenable to systematic organisation (Porter 1997). They offered acute treatment to the sick poor, and their clinical culture was shaped by increasingly stringent admission criteria favouring curable patients. The criterion of curability is the direct ancestor of the category with which this article is concerned, and it already displays all three properties. It is prospective, in that it turns on an anticipated outcome. It is comparative, in that it allocates a subscribed and finite endowment. It is self-confirming, in that patients excluded as incurable were thereby denied the treatment that might have altered the prognosis. Its structural effect grew more pronounced over the following century, and it fell most heavily on patients who were chronic, incurable or old.

Two institutional experiments qualify that picture. The Hôtel des Invalides in Paris, established by royal edict in 1670, housed at its height more than four thousand veterans in a regimented environment that

included workshops for practising trades alongside medical attention (Risse 1999). The expectation that residents should engage in labour commensurate with their remaining abilities was an early institutional expression of what later became occupational therapy, and it stood in sharp contrast to the custodial model prevailing in civil poor relief (Rowlands 2012; Musée de l'Armée 2022). Gilbert's Act of 1782, for its part, permitted parishes to group into unions and required that older, infirm and impotent persons be separated from the able-bodied unemployed (Gilbert's Act 1782; Shave 2011). Its practical effect was uneven, but it marked a legislative recognition of old age as a distinct welfare category rather than a variety of idleness.

Hospital reform in France was more radical, bound up with the reorganisation of social institutions after 1789. Michel Foucault's account of that transformation remains analytically useful: the patient became not someone with a named disease but a body whose lesions could be read by the trained clinical gaze, and the hospital was reconceived from a place of charitable custody into a site of knowledge production (Foucault 1973). Its principal beneficiaries were those with acute conditions most useful to medical science, not older patients whose illnesses were well understood but poorly treatable. For the majority who qualified for none of these innovations, the actualities of care had changed little (Thane 2000).

Enlightenment gains for older people were therefore real but circumscribed, and the milieu that enabled them imposed a new normative pressure. The useful citizen of Enlightenment political thought was imagined as active, productive and autonomous, and those requiring sustained care fell outside that ideal, not as unfortunate exceptions but as figures whose dependence demanded explanation (Porter 1997). Where earlier frameworks had treated dependence in old age as a state of nature for which charity was the fitting response, Enlightenment thinking invested it with moral valence, and with the suggestion that the proper answer to incapacity was restoration to productive function.

Industrialisation and Insurance: The Judgement Becomes a Number

In the nineteenth century the social circumstances of bodily harm and old age changed profoundly. Rapid industrialisation, urbanisation and wage labour produced the first widespread documented examples of workplace accidents and chronic occupational disease. New patterns of national and imperial warfare generated large numbers of wounded and disabled soldiers. These developments encouraged rehabilitative practices, especially among those who might return to productive labour. Older workers and veterans occupied an ambiguous position, increasingly visible in public discussions of risk and welfare, yet generally considered less worthy of investment than younger men (Cooter 1993).

Throughout the first half of the century, responses to industrial injury remained fractured and localised. Medical care was provided through a patchwork of works doctors, small infirmaries and nearby voluntary hospitals. In late nineteenth-century Middlesbrough, industrial workers' subscriptions funded accident care at North Ormesby Hospital, blurring the lines between self-help, patronage and contributory insurance (Yasumoto 2006). Treatment aimed chiefly at immediate survival, through haemostasis, amputation and the management of fractures and infections, rather than at long-term functional

restoration. Once the acute episode had abated, older workers unable to return fully to heavy labour might be dismissed, informally pensioned off or left to depend on parish charity, with little in the way of structured rehabilitation.

By mid-century industrial accidents had become a visible social question across much of Europe, prompting new forms of regulation and insurance. Governments in Britain, Germany and Italy began compiling statistics on workplace injury and enacting legislation for employer liability or mandatory accident insurance (Table 2) (Hennock 2007). Older injured workers were often at a disadvantage in the resulting negotiations. Their shorter life expectancy, higher prevalence of comorbidities and the stereotype of the spent body meant that medical examiners and insurance boards tended to deem them permanently invalid rather than candidates for rehabilitative effort (Rabinbach 1992).

Table 2
Chronology of key policy moments relevant to rehabilitation of older adults, late nineteenth century to 2025.

Sources: Germany: Hennock (2007); Rabinbach (1992). First World War: Cooter (1993); Gerber (2012). Physical medicine and rehabilitation: Gritzer and Arluke (1985). Geriatrics: Matthews (1984); Cosin (1954). Disability rights: Stiker (1999). UN resolution: United Nations Human Rights Council (2025).

Date	Region	Policy or institutional change	Implication for older people
Late nineteenth century	Germany	State accident and invalidity insurance	Opened space for older injured workers' rehabilitation when cost-effective
1914–18	Europe	First World War rehabilitation schemes for disabled soldiers	Older veterans often deprioritised in favour of younger men
1940s–60s	Western Europe, North America	Emergence of physical medicine and rehabilitation as specialties	Older patients gradually included in rehabilitation units
1950s–70s	Various	Development of geriatrics and geriatric units	Spurred dedicated geriatric rehabilitation wards
Late twentieth century	Global	International disability rights instruments	Advocacy for life-course approach including older adults
3 April 2025	Global (UN)	Human Rights Council resolution A/HRC/RES/58/13 on convention for older persons' rights	Potential legal basis for rehabilitation as an enforceable right

Military conflicts in the nineteenth century provided another important laboratory for post-injury care. The Napoleonic Wars, the Crimean War and the American Civil War created large cohorts of amputees and chronically ill veterans. Florence Nightingale's reforms during the Crimean War emphasised environmental and nursing practices, among them clean air, adequate nutrition and mental engagement, that prefigure an approach to convalescence attentive to the ward as well as to the wound. Her Notes on

hospitals of 1863 laid out design principles for light, ventilation and ward organisation that influenced hospital construction for decades. The range of modalities employed with older patients across this period is summarised in Table 3 (Nightingale 1863; Bostridge 2008). Rehabilitation in the contemporary sense nevertheless remained primitive. Convalescent depots, veterans' homes and invalid battalions provided rest, rudimentary medical supervision and sometimes light work, but little organised training, whether physical or vocational. Younger men were prioritised both for return to front-line duty and for post-war economic productivity (Gerber 2012).

Table 3
Modalities of rehabilitative practice used with older people, c. 1500–1950.

Sources: Porter (1997); Emch-Dériaz (1992); Ibn Sina (1973); Cooter (1993); Gritzer and Arluke (1985).

Modality	Example intervention	Period of prominent use	Typical older target group
Therapeutic exercise	Walking regimens, light calisthenics	Renaissance onwards	Wealthy older patients seeking active old age
Manual therapies	Massage, joint manipulation	Early modern to twentieth century	Older rheumatic patients in spas and clinics
Hydrotherapy	Mineral baths, warm and cold water treatments	Eighteenth to twentieth centuries	Affluent retirees, war pensioners
Occupational therapy	Weaving, basket-making, craft work	Late nineteenth to twentieth century	Older long-stay hospital and asylum patients
Prosthetic training	Limb prosthesis fitting and gait training	Post-war periods	Older war veterans, industrial accident survivors

It is at this point that the judgement acquires its modern form. Actuarial thinking took hold in insurance medicine, offering new techniques for classifying bodies according to their residual capacity, with age emerging as the decisive marker of restorability (Rabinbach 1992). Medical examiners increasingly quantified impairment and work ability through tables that created implicit or explicit penalties for older claimants. What had previously been an unstated preference for restoring the young and the useful was now written into schedules, coefficients and thresholds. The change is decisive for our argument, and it is a change of form rather than of content. Once the judgement is expressed as a number it acquires the appearance of having been measured. It becomes portable between institutions. It can be applied by clerks who hold no view at all about older people, which is precisely why locating the problem in individual attitudes has so limited a purchase on it. And it becomes difficult to contest, because disputing it now requires disputing an arithmetic rather than an opinion. The cumulative impact for older people was ambivalent. The widening of hospital networks and of accident insurance increased access to acute treatment and some institutional support relative to previous periods, but the logics underpinning nineteenth-century rehabilitation practices, among them cost containment, productivity and a future-oriented understanding of labour, tended to leave later-lifers at the margins (Thane 2000).

Geriatrics: The Judgement Becomes a Diagnosis

The formal emergence of geriatrics as a medical specialism transformed the provision of rehabilitation for older people. The term 'geriatrics' was coined by the Viennese-American physician Ignatz Leo Nascher in a 1909 article and elaborated in his 1914 textbook (Nascher 1909, 1914). Nascher argued that ageing constituted a distinct physiological state requiring dedicated medical attention comparable to that given to children by paediatrics. In Britain the foundational figure was Marjory Warren, whose work at the West Middlesex Hospital opened this article. From 1935 she systematically assessed and actively rehabilitated chronically sick older adults, patients who had previously languished in long-stay wards without investigation or therapeutic intervention (Matthews 1984; St. John and Hogan 2014).

Warren's achievement is best read as a practical refutation of the self-confirming property. The patients she inherited had been placed in chronic wards because they were judged unlikely to improve, and their subsequent failure to improve had been taken as confirmation of the judgement. By interrupting the cycle at the point of assessment she demonstrated that the deterioration had been produced in part by the response to the prediction. She insisted on comprehensive assessment of each patient's physical and mental condition, followed by individualised programmes of physiotherapy, occupational therapy, nursing rehabilitation and social support (Warren 1943, 1946). Her 1946 paper 'Care of the chronic aged sick' reported that, of two hundred patients previously considered beyond active treatment, a substantial proportion were discharged home or to less intensive care following structured rehabilitation (Warren 1946). The British Geriatrics Society, founded in 1947, professionalised the new specialism and established geriatric medicine as a recognised specialty within the nascent National Health Service (Barton and Mulley 2003; Brocklehurst 1985a).

Lionel Cosin, working at the Cowley Road Hospital in Oxford, extended Warren's model by demonstrating the value of day hospitals and of early discharge supported by outpatient rehabilitation, institutional innovations that decoupled rehabilitation from long-term hospitalisation (Cosin 1954; Brocklehurst 1985b). These reforms established the template for modern geriatric rehabilitation units: dedicated ward space, multidisciplinary teams, goal-oriented programmes and planned discharge to community settings. In North America parallel developments took place through the growth of physical medicine and rehabilitation as a specialty and the expansion of skilled nursing facilities under Medicare from 1965, though these frameworks were initially less focused on age-specific geriatric needs (Gritzer and Arluke 1985; Stevens 1999).

At the conceptual centre of twentieth-century geriatric rehabilitation stood Comprehensive Geriatric Assessment, a multidimensional, interdisciplinary process for appraising the medical, psychological, functional and social circumstances of an older person and co-ordinating care accordingly (Rubenstein 2004). It can be read as more than a diagnostic instrument. It embodied a particular vision of the older person as a complex social being rather than a collection of failing organs, and in doing so it reframed what counted as a legitimate object of medical attention in later life. Influential clinical research reported

that older people who received such assessment were more likely to remain living at home and less likely to be admitted to nursing homes than those who did not (Stuck et al. 1993; Ellis et al. 2011).

Such findings established the model as authoritative practice, and the achievement should not be understated. Yet its very authority illustrates the ambivalence at the heart of the twentieth-century settlement. Warren and her successors won the argument for older people's rehabilitation by demonstrating that it produced countable gains, and in the institutional conditions of the period the demonstration was necessary. The consequence was that later-life rehabilitation came to be justified in the idiom of measurable outcomes, an idiom that would later make it easier to withhold care from those whose recovery promised fewer countable gains. The judgement was not abolished by the founders of geriatrics. It was rehabilitated in a second sense, given clinical respectability, an evidence base and a settled place in the assessment protocol, and it re-entered practice as a diagnosis rather than an opinion.

Contemporary Models and the Persistence of the Judgement

Geriatric day hospitals and home-based programmes have offered intensive rehabilitation since the late twentieth century without requiring twenty-four-hour admission (Table 4). Day hospitals provide multidisciplinary assessment and therapy for older people living in the community with complex needs, with the stated aims of preventing hospital admissions, facilitating early discharge and enabling independence (Forster et al. 2008; Wong et al. 2024). Home-based models include early supported discharge teams, generic community rehabilitation teams and organised reablement services, typically four- to twelve-week programmes delivered by home-care workers trained and supervised by therapists, with an emphasis on supporting older people to perform the activities of daily life themselves rather than having tasks done for them (Handoll et al. 2009; Legg et al. 2016; British Geriatrics Society 2024). Evaluations of reablement suggest modest gains in everyday functioning and lower care demands for some groups, though benefits are uneven and tend to fade without sustained support. That pattern is ordinarily reported as a limitation of the intervention. It can equally be read as evidence that rehabilitative autonomy is a function of continued social investment rather than a property of the individual body, which is precisely what the language of potential obscures.

Table 4
Contemporary models of geriatric rehabilitation and evidence of effectiveness, c. 1990–2026.

Sources: Inpatient comprehensive geriatric assessment: Ellis et al. (2011); Stuck et al. (1993). Early supported discharge: Forster et al. (2008). Day hospital: Wong et al. (2024). Restorative programmes: Resnick et al. (2020); Dedeyne et al. (2017). Reablement: British Geriatrics Society (2024).

Model	Setting	Typical duration	Evidence of effectiveness
Inpatient comprehensive geriatric rehabilitation	Hospital or dedicated rehabilitation unit	2–6 weeks	Reduces nursing-home admissions and mortality; improves function
Early supported discharge with home-based rehabilitation	Community and home	4–12 weeks	Comparable to extended inpatient care for stroke and hip fracture; reduces readmissions
Day-hospital geriatric rehabilitation	Hospital-based day units	4–16 weeks	Prevents admissions; maintains function in community-dwelling patients with complex needs
Long-term care restorative programmes	Nursing homes, residential care	Ongoing	Stabilises or improves function with multidisciplinary support
Reablement	Community and home	4–12 weeks	Modest but meaningful gains in independence; reduces long-term care hours

In nursing homes and other long-term care facilities, recent models have moved from purely custodial care towards restorative or function-focused approaches. These programmes train care staff to integrate rehabilitation principles into daily work, for instance by prompting residents to walk to the dining room, encouraging self-care during transfers, or joining group exercise sessions. Evidence indicates that multimodal interventions involving physical training, nutritional supplementation, cognitive stimulation and environmental adaptation can maintain or improve function among frail residents when aligned with comprehensive assessment and interdisciplinary oversight (Resnick et al. 2020). Staffing shortages, high turnover and the complexity of residents' conditions often impede implementation and sustainability.

Programmes addressing frailty have emerged as a distinct field. Recent syntheses of exercise interventions in long-term care report that multicomponent approaches, combining resistance, aerobic, balance and flexibility activity, tend to support older people more effectively than single forms of exercise, and that combining physical activity with nutritional and cognitive support can sustain strength, mobility and a better sense of everyday wellbeing (Dedeyne et al. 2017; Yang et al. 2026). Read against the long history traced here, such findings give contemporary, quantified form to what Warren and Cosin had already insisted seven decades earlier: that later life is not a closed account but a stage at which people remain open to recovery when care is systematic, collaborative and attentive to the individual.

Telerehabilitation and remote monitoring have grown considerably, particularly since the COVID-19 pandemic, with exercises supervised and follow-up provided by video or telephone for older people with limited mobility or those in rural settings (Oh-Park et al. 2021). A 2025 international consensus study on

eHealth in geriatric rehabilitation identified the core components of effective digital models as remote physiotherapy, cognitive training applications and caregiver-facing platforms, while noting that digital literacy barriers and infrastructure inequalities limit uptake among the oldest and most frail populations (Kraaijkamp et al. 2025).

Access to rehabilitation nevertheless remains uneven. Many older people who might benefit do not have access, particularly those in deprived neighbourhoods, rural areas or care homes, and those with advanced dementia or severe frailty (WHO Regional Office for Europe 2022). Some programmes continue to prioritise older people judged to have good rehabilitation potential, a designation that risks perpetuating ageism and ableism by recasting a social judgement as a clinical one and so excluding those with the greatest need (British Geriatrics Society 2024). A 2024 scoping review of rehabilitation delivery models across forty-five countries of the European Region of the World Health Organization (WHO) found that telerehabilitation and community-based services were the least available modalities, with workforce shortages and fragmented financing identified as the primary structural barriers (Seijas et al. 2024). The judgement with which we began therefore survives in the era of evidence-based practice, and it survives in the very documents that set out to widen access. Its three properties are intact. Allocation remains comparative under conditions of scarcity. Eligibility remains prospective and tied to prevailing notions of a worthwhile outcome. Refusal remains self-confirming, since the older person denied a rehabilitation place will in due course furnish the functional evidence that the refusal was correct.

Conclusion: Rights, Resources and the Worth of Later Life

The history surveyed here is neither one of unqualified progress nor of guaranteed neglect. For more than two millennia, societies have developed practical systems of treatment, including dietary protocols, exercise therapies, manual techniques, occupational prescriptions and movement schemes, that form the basis of modern geriatric rehabilitation. What has varied is not the availability of technique but the willingness to spend it on older bodies. The ancient elite body was regarded as improvable; the frailty of the medieval pauper was sustained but seldom reversed; only selected industrial workers were rehabilitated according to actuarial calculation; and the post-war geriatric patient was deemed salvageable only once a generation of pioneering physicians had demonstrated that rehabilitation was efficient. What changes across these phases is not the human need for rehabilitative care in later life, but the political economy of ageing that determines who receives it, and the cultural narratives through which a society decides whose later years are worth restoring.

Recognising rehabilitation potential as a social judgement rather than a prognostic variable has a specific consequence for practice. If it were the measurement it appears to be, the appropriate response to its inequitable application would be better measurement: more sensitive instruments, better validated scales, larger prognostic datasets. The history assembled here suggests that this response mistakes the object. The judgement has repeatedly reconstituted itself in whatever idiom was locally authoritative, humoral, theological, actuarial and now diagnostic, while its three properties persisted unchanged.

Refining the instrument addresses none of them. A better scale still allocates comparatively under scarcity; it still encodes a prospective view of which outcomes count; and it still generates the evidence that vindicates its own refusals. A category with that structure cannot be corrected from within by the improvement of its own techniques.

Rehabilitation in later life therefore requires recognition as a rights-based entitlement rather than a discretionary benefit. The distinction matters precisely because of the properties described above. An entitlement is not comparative, since it does not require the claimant to outrank other claimants. It is not prospective in the relevant sense, since it does not condition access on the social value of the anticipated result. And it interrupts the self-confirming cycle by establishing access before the deterioration that would otherwise be cited as its justification. Decisions about rehabilitative investment have historically been made on behalf of older people by physicians, almshouse governors, insurance boards and welfare administrators, rather than in co-operation with older people themselves. International normative developments are beginning to reframe this position. The WHO Rehabilitation 2030 initiative, the integration of rehabilitation into universal health coverage frameworks and the WHO Global Report on Ageing and Health have collectively repositioned rehabilitation as a public good (World Health Organization 2017). On 3 April 2025 the UN Human Rights Council adopted a resolution establishing an open-ended intergovernmental working group tasked with elaborating a legally binding instrument on the rights of older persons, after fourteen sessions of a UN Working Group on Ageing had highlighted continued protection gaps globally (United Nations Human Rights Council 2025). A universal convention would supply the legal clarity and enforcement mechanisms needed to make access to rehabilitation a claim that does not depend on a prior estimate of the claimant's worth.

Ageism, present at interpersonal, professional and institutional levels, remains the most enduring barrier to the realisation of such a framework. The notion of rehabilitation potential marks the point at which clinical judgement meets social bias, consigning older people to permanent invalidity not because recovery is clinically impossible but because it is assumed to be economically unjustifiable (Oliver 2009). A scoping review of ageism in health services published in 2023 documented that ageist attitudes manifest interpersonally, through perspectives that devalue the needs of older adults, and institutionally, through physical and service-access barriers that result in neglect or non-assistance (Araújo et al. 2023). The institutional half of that finding is the half our analysis predicts, and the half least amenable to attitudinal remedies. Addressing it requires structural change alongside educational reform: removing age-based exclusion criteria from rehabilitation pathways, requiring services to record and justify refusals rather than only admissions, mandating geriatric competency training for practitioners, and building rehabilitation around older people's own goals, biographies and values rather than around institutional convenience.

Old-age rehabilitation will be sustainable only if health systems confront a deeper paradox of value. The very approaches that the evidence presents as the most effective and economical investments in later-life function, among them comprehensive assessment, multidisciplinary teamwork, multicomponent responses to frailty and continuity of care in the community, remain systematically under-resourced

relative to acute curative medicine (Ellis et al. 2011). That persistent mismatch cannot be explained by evidence alone. It reflects an enduring cultural hierarchy in which the dramatic rescue of the acutely ill commands prestige and funding, while the slower, relational work of restoring function in later life is treated as marginal. Continuity is most needed at the transition from hospital to home, and is hindered by workforce shortages, fragmented financing and the structural separation between health and social care budgets (WHO Regional Office for Europe 2022). The imbalance is still more pronounced in low- and middle-income countries, where frailty is widespread but rehabilitative infrastructure scarce.

Who is considered worthy of rehabilitation has always been a political question, however thoroughly disguised in clinical language. The ancient physician devised his regimen for the high-born elder whose continued existence was prized; the industrial insurer calculated whether it was cheaper to rehabilitate the older worker or pension him off; and the post-war geriatrician campaigned successfully to convert chronic sick wards into rehabilitation units. Each of these transitions was made not simply on the basis of expanded clinical knowledge, but in response to a changing calculus about the value of older lives (Thane 2000). Naming that calculus for what it is does not by itself alter it. It does, however, identify what an alteration would have to consist in, and it locates the argument where it belongs, in the politics of entitlement rather than in the refinement of prognosis. The emerging international rights framework represents the most ambitious attempt yet to entrench the value of later life in principled, enforceable terms. The task now is to build the personnel, institutions, financing and political will to make that principle a reality for all older adults, and not only for those whose recovery can be portrayed in terms of productivity, but also for those whose recovery is measured by a steadier gait, a dinner shared with family, or the ability to stand up each morning.

Declarations

Use of generative artificial intelligence

During the preparation of this work the authors used a large language model to assist with language polishing and with the verification of bibliographic records. The tool was not used to generate text, arguments, images or data. After using this tool the authors reviewed and edited the content as required and take full responsibility for the content of the publication.

Author Contribution

D.S. had the idea for the article and drafted the manuscript. D.S. and M.K.S. performed the literature search and analysis of sources. D. K. critically revised the work. All authors read and approved the final manuscript.

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