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Review Article

Why Supportive Peri-Implant Care Succeeds or Breaks Down across Clinical Settings: A Realist Review of Recall Systems, Self-Care Support, and Continuity between Restorative and Periodontal Services

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ABSTRACT

Supportive peri-implant care is widely regarded as necessary for maintaining peri-implant health and limiting recurrence after treatment, yet the clinical meaning of an effective maintenance programme remains uncertain. Recall attendance, professional plaque control, self-care support, prosthetic accessibility, risk reassessment, and continuity between clinicians are frequently discussed together despite representing different programme resources and potentially different mechanisms. This realist review examined how supportive peri-implant care may succeed, weaken, or fail across varying patient, implant, restorative, treatment, and service contexts. A theory-driven evidence synthesis was undertaken using iterative searches, relevance and rigour appraisal, and context–mechanism–outcome reasoning. The evidence indicates that supportive care cannot be reduced to recall frequency alone. Its effectiveness appears conditional on the biological and clinical state established at the end of active treatment, the patient's capacity to perform effective self-care, access around the implant-supported restoration, continued professional reassessment, and the persistence of an accountable care pathway over time. Maintenance adherence is consistently associated with more favorable outcomes, but attendance may also reflect motivation, access, baseline risk, treatment response, and other confounding influences. Evidence remains insufficient to identify a universally optimal recall interval or single maintenance component. The emerging programme theory therefore treats supportive peri-implant care as a conditional continuity process in which clinical maintainability, patient capability, hygienic accessibility, and repeated reassessment must remain aligned. Cross-service continuity between restorative and periodontal care is retained as a plausible but incompletely tested explanatory mechanism requiring direct evaluation.

Keywords: Peri-implantitis, Supportive peri-implant care, Maintenance adherence, Implant prosthodontics, Self-care, Realist review

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Introduction

Peri-implant health is not secured permanently when an implant is restored or when active treatment of peri-implant disease ends. Contemporary clinical guidance places prevention, risk assessment, professional monitoring, patient education, plaque control, and supportive care within the longitudinal management of implant patients [1]. Recent consensus recommendations similarly emphasize continued maintenance and individualized reassessment rather than treating implant therapy as a completed episodic

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intervention [2]. The practical difficulty is that "supportive peri-implant care" encompasses multiple activities whose causal roles are not equivalent. A recall appointment, professional instrumentation, reinforcement of oral hygiene, reassessment of peri-implant tissues, modification of a restoration, and referral for recurrent disease may occur within the same programme without operating through the same mechanism.

The uncertainty is particularly important after peri-implantitis treatment. A systematic review of supportive care following active therapy found marked heterogeneity in maintenance protocols, definitions of stability, follow-up procedures, and reported long-term outcomes; importantly, the evidence did not establish an optimal supportive-care frequency or isolate the effects of several individual programme components [3]. Longitudinal incidence data also indicate that peri-implant disease develops within heterogeneous patient and site configurations rather than as a uniform consequence of elapsed time [4]. A fixed recall interval may therefore be administratively convenient while remaining an incomplete explanation for why one patient's condition remains stable and another's deteriorates.

Adherence provides a second source of ambiguity. A systematic review found large variation in definitions and levels of compliance with supportive periodontal and peri-implant therapy, limiting attempts to interpret attendance as a standardized exposure [5]. At the same time, local restorative conditions can influence whether plaque removal and professional instrumentation are practically achievable. Implant position, emergence configuration, restoration contour, and other prosthetic features may alter access for self-performed and professionally delivered hygiene procedures [6]. Long-term observational evidence nevertheless shows that patients classified as regularly compliant with maintenance can experience substantially less peri-implant disease than irregularly compliant patients [7]. Such findings make adherence clinically important, but they do not establish that attendance itself is the sole active mechanism. Regular attenders may also differ in self-care capability, motivation, risk profile, restorative maintainability, access to care, or responsiveness to professional advice.

These interacting contingencies make the problem suitable for realist synthesis. Rather than asking whether supportive care produces a single average effect, realist review examines how programme resources interact with context to generate or inhibit mechanisms that lead to outcomes. A recent realist review of publicly funded dental services demonstrated the applicability of context–mechanism–outcome reasoning to oral-health service participation and showed how organizational arrangements can alter whether intended programme resources are actually activated [8]. The present review applies that explanatory orientation specifically to peri-implant maintenance. Its purpose is to develop and test a programme theory explaining why supportive peri-implant care succeeds, weakens, or breaks down across clinical settings, while distinguishing direct peri-implant evidence from proposed interpretations concerning continuity between restorative and periodontal services.

Materials and Methods

The review was designed as a realist synthesis and reported in accordance with the explanatory principles of the RAMESES publication standards [9]. PRISMA 2020 principles were additionally used to make evidence identification and selection transparent, without treating PRISMA as a substitute for realist methodology [10]. The review question was framed around how supportive peri-implant care functions, for whom it is more or less likely to function, and under which biological, restorative, behavioral, treatment, and service conditions its intended effects may be weakened.

The initial programme theory treated supportive peri-implant care as a longitudinal system rather than an isolated appointment schedule. Four provisional domains were examined: the clinical state inherited from active treatment; the patient's capability to perform effective self-care and remain engaged with maintenance; the hygienic and professional accessibility of the implant-supported restoration; and continuity of reassessment and responsibility across successive episodes of care. These domains were hypotheses for testing rather than predetermined findings. Recall frequency was treated as a programme feature, not as a mechanism in itself.

Theory-driven searches were conducted on 20 October 2026 using PubMed-indexed literature and targeted citation follow-up. The substantive evidence window was 2017–2025. Six search families addressed supportive maintenance and compliance; peri-implant mucositis and self-care; restorative and prosthetic accessibility; treatment endpoints and recurrence; guideline and risk synthesis; and realist-review methodology. Search terms combined peri-implantitis or peri-implant disease with concepts including supportive care, maintenance, recall, compliance, adherence, oral hygiene, self-care, prosthetic design, cleansability, recurrence, surgical treatment,

prevention, and treatment. Methodological retrieval also targeted realist review, dentistry, oral health, and RAMESES. Methodological reporting sources predating 2017 were eligible only when indispensable to the review design.

Eligibility was based on explanatory relevance rather than journal prestige. Studies and syntheses could contribute when they informed at least one of the following: post-treatment maintainability; supportive-care delivery; patient self-care or maintenance adherence; implant or prosthetic conditions affecting care; recurrence or long-term stability; or mechanisms through which continuity of care could plausibly be preserved or disrupted. Journal quartile was not used as an evidence-selection criterion. Evidence was excluded from the substantive synthesis when it did not meaningfully inform the programme theory, duplicated the explanatory role of a more informative source, or addressed an intervention without contributing to the maintenance question.

A working appraisal set of 47 unique candidate reports was retrieved and assessed for relevance and design-appropriate rigour. All 47 were sufficiently retrievable for appraisal. Seven were not carried into the final source map after relevance and duplication-of-function assessment, leaving 40 sources for the article evidence map. Of these, 29 were treated as substantive evidence units contributing directly to realist synthesis, whereas 11 served methodological, guideline, contextual, or triangulation functions. The 40-reference article allocation was therefore not used as the review inclusion count.

Rigour appraisal was matched to study design. Systematic reviews were examined for search transparency, appraisal methods, heterogeneity, and the correspondence between evidence and conclusions. Randomized studies were interpreted according to intervention specificity and follow-up. Cohort and registry evidence was assessed for selection, attrition, confounding, baseline differences, and limits on causal attribution. Guidelines and consensus documents were treated as evidence-informed recommendations rather than direct proof that any single maintenance component independently changes outcomes. Relevance and rigour were considered together: methodologically strong evidence could have limited explanatory relevance, whereas a clinically informative longitudinal study could contribute to theory while retaining substantial confounding risk.

Synthesis proceeded iteratively. Programme resources were first separated from candidate mechanisms and outcomes. For example, a scheduled recall visit was considered a resource; continued engagement, improved capability to perform self-care, recognition of deterioration, or willingness to re-enter active treatment represented possible responses or mechanisms; and maintained tissue stability, recurrence, discontinuity, or disease progression represented outcomes. Context included patient susceptibility, the condition achieved after active treatment, prosthetic accessibility, tissue configuration, service organization, and prior treatment history. Candidate context–mechanism–outcome configurations were accepted only when their components could be linked to the evidence map, and proposed mechanisms that exceeded direct evidence were explicitly retained as interpretive hypotheses.

The executed search and appraisal structure is summarized in **Table 1**. The table records the role of each search stream without converting search families into artificial independent samples.

Table 1. Theory-driven search streams and evidence functions used to construct the peri-implant supportive-care programme theory

Search stream	Principal concepts	Primary evidence function	Eligibility emphasis	Main interpretive boundary
Supportive maintenance	Supportive care, recall, compliance, adherence	Identify maintenance structures and long-term adherence evidence	Longitudinal supportive-care or recurrence relevance	Attendance was not assumed to be a mechanism
Self-care and mucositis	Oral hygiene, self-care, interdental cleaning, irrigation	Examine patient-delivered maintenance resources	Direct self-care or inflammation-control relevance	Device-specific effects were not generalized to complete maintenance programmes
Restorative accessibility	Prosthetic design, restoration contour, cleansability, implant position	Identify structural conditions affecting hygiene and instrumentation	Restorative features plausibly affecting peri-implant maintenance	Predisposition was not treated as deterministic causation

Treatment endpoint and recurrence	Peri-implantitis treatment, recurrence, residual disease, long-term outcome	Determine how the state after active treatment conditions later maintenance	Post-treatment longitudinal evidence	Treatment efficacy was separated from maintenance efficacy
Guideline and risk synthesis	Prevention, treatment guidance, patient/site risk	Define accepted care expectations and contextual heterogeneity	Evidence-based guidelines and contemporary syntheses	Recommendations were not converted into component-specific causal effects
Realist methodology	Realist review, RAMESES, oral-health services	Guide programme-theory construction and reporting	Methodological relevance	External dental-service mechanisms were not imported as peri-implant findings

The identification process did not reveal a single evidence stream capable of explaining supportive-care success in isolation. Instead, the retained evidence had to be read across clinical treatment, maintenance behavior, restorative accessibility, risk, and service continuity. **Figure 1** therefore represents the review flow as a theory-driven convergence rather than as a conventional linear effectiveness-search pipeline.

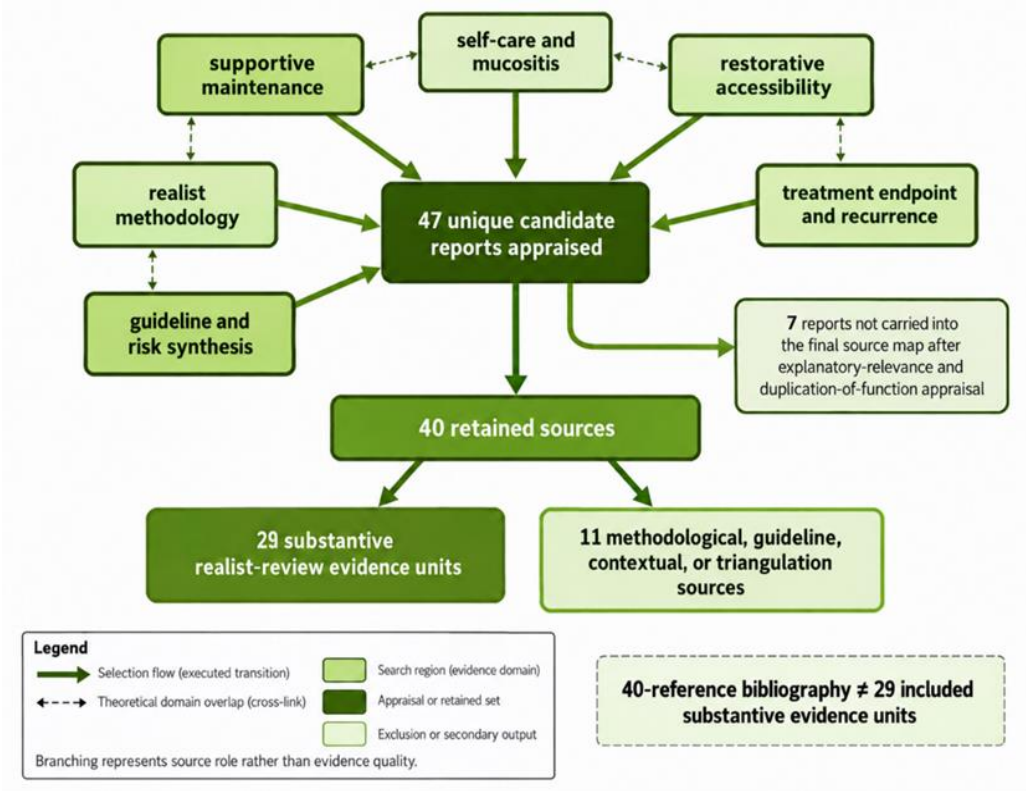


Figure 1. Theory-Driven Evidence Identification and Selection across Peri-Implant Maintenance Domains

Results and Discussion

Supportive care contexts and programme mechanisms

The first synthesis step separated programme resources from the circumstances in which they are delivered. Contemporary prevention evidence indicates that peri-implant disease prevention begins before disease becomes established and extends across implant planning, restoration, patient education, plaque control, and continuing professional care [11]. This breadth matters because supportive maintenance cannot plausibly compensate for every unfavorable condition created earlier in treatment. Once inflammation is present, mechanical professional care can improve clinical measures in peri-implant mucositis, but resolution is neither automatic nor uniform across patients and protocols [12]. Adjunctive measures may provide incremental benefit in some settings, although heterogeneity between interventions and endpoints prevents interpretation of adjuncts as universally necessary components of maintenance [13].

A similar distinction applies after peri-implantitis has developed. Systematic evidence on mechanical and physical nonsurgical approaches shows that

professional instrumentation can contribute to disease management, while outcomes remain variable and complete resolution is not assured [14]. Chemical decontamination evidence is based on a comparatively small and heterogeneous literature, limiting confidence in claims that one chemical strategy produces a stable maintenance-ready state [15]. Other nonsurgical adjunctive measures also show intervention- and outcome-dependent results [16]. These findings support a central realist distinction: active disease treatment creates the clinical condition within which supportive care subsequently operates, but treatment procedures themselves should not be mislabeled as maintenance mechanisms. If active inflammation, deep pockets, inaccessible deposits, or other disease features remain, a subsequent recall programme begins from a different context than one initiated after a stable treatment endpoint.

The implant and restoration further shape what supportive care can realistically accomplish. Surgical and implant-related factors are associated with differences in disease susceptibility and progression, although the strength and causal status of individual associations vary [17]. Contemporary systematic evidence also indicates that prosthetic design can influence peri-implant tissue outcomes and the practical conditions for hygiene and professional access [18]. These findings make restoration geometry relevant to supportive care even when the maintenance programme itself does not include prosthetic modification. A patient may attend reliably and receive repeated hygiene instruction, yet a restoration that limits access can constrain the extent to which those resources are translated into effective plaque control or instrumentation.

Patient-level heterogeneity adds another layer. Systemic, behavioral, and patient-related risk factors are not distributed uniformly among implant recipients, and their associations with disease vary in consistency and magnitude [19]. Soft-tissue configuration may also alter local vulnerability or maintainability, although evidence derived from disease-free soft-tissue dehiscence cannot simply be transferred to recurrence after peri-implantitis treatment [20]. Consequently, the same supportive-care schedule can operate in clinically different contexts even when appointment intervals and professional procedures appear identical.

Maintenance adherence is one of the most consistent candidate explanatory variables, but the evidence argues against treating it as a unitary mechanism. Observational data show differences in peri-implant disease burden between patients categorized by their compliance with preventive maintenance [21]. After peri-implantitis treatment, regular, erratic, and absent attendance patterns also occur in routine care, demonstrating that continuity can deteriorate even after patients have completed active therapy [22]. These observations are compatible with the proposition that continued contact creates repeated opportunities for reassessment and reinforcement. They are equally compatible, however, with competing explanations in which regular attenders have greater health literacy, stronger motivation, fewer access barriers, better baseline prognosis, or more favorable restorative conditions. Attendance therefore functions most safely as an observable behavioral expression of a broader maintenance process rather than proof of the underlying mechanism.

Self-care evidence strengthens that interpretation. A randomized clinical trial evaluating an adjunctive oral-irrigation approach in peri-implant mucositis demonstrates that patient-delivered care can be modified experimentally and can contribute to changes in inflammatory outcomes [23]. Yet a device-specific intervention cannot represent the whole supportive-care programme. Effective self-care requires more than possession of an aid: patients must be able to access relevant surfaces, understand and sustain the required behavior, adapt techniques to restoration design, and recognize when home care is insufficient. Professional maintenance likewise requires the ability to detect change, respond to recurrent inflammation, reconsider restorative or surgical contributors, and escalate treatment when disease control has been lost.

Taken together, the evidence supports four analytically different components of the emerging programme theory. First, clinical maintainability concerns the biological and structural state inherited from active treatment. Second, hygienic accessibility concerns whether the restoration and peri-implant anatomy permit effective patient and professional cleaning. Third, maintenance capability concerns whether patients can understand, perform, and sustain appropriate self-care and continued attendance. Fourth, professional continuity concerns whether repeated contact produces meaningful reassessment, reinforcement, and timely re-entry into active treatment rather than functioning as a sequence of disconnected prophylaxis visits.

The included evidence does not support a universal hierarchy among these components. Their explanatory value is conditional. Strong adherence cannot necessarily overcome unresolved disease or severe access limitations, while an anatomically maintainable restoration does not ensure stability if self-care and follow-up collapse. Conversely, recurrent disease

during maintenance does not by itself prove programme failure because recurrence may reflect residual disease, baseline susceptibility, or limitations of the preceding treatment. **Table 2** therefore organizes the included evidence by the clinical question each evidence family can answer and, equally importantly, by what it cannot establish.

Table 2. Included peri-implant evidence domains and their relevance to explaining supportive-care success or breakdown

Evidence domain	Clinical state represented	What the evidence can inform	Mechanistic relevance	Principal limitation for the programme theory
Prevention and supportive-care syntheses	Patients before or after development of peri-implant disease	Components commonly incorporated into preventive and maintenance care	Identifies programme resources and accepted longitudinal-care expectations	Does not isolate a universally optimal recall interval or single active component
Mucositis treatment and self-care evidence	Reversible peri-implant inflammatory states	Responsiveness of inflammation to professional or patient-delivered plaque-control strategies	Demonstrates that patient capability and professional intervention can be modifiable	Short-term inflammatory improvement cannot be equated with durable prevention
Nonsurgical peri-implantitis evidence	Established disease before or during active therapy	Extent and limitations of instrumentation and adjunctive approaches	Defines the treatment-derived context entering later maintenance	Treatment response is not itself evidence of supportive-care effectiveness
Implant, prosthetic, and tissue-context evidence	Functioning implant restorations with varying local configurations	Conditions that may alter susceptibility, cleansability, and access	Supports hygienic accessibility as a context that can enable or constrain care	Most evidence cannot prove that one restorative feature independently causes recurrence
Maintenance-compliance evidence	Patients enrolled, intermittently engaged, or disengaged from continued care	Associations between continuity of attendance and peri-implant outcomes	Supports engagement and repeated reassessment as candidate pathway components	Compliance is observational and may proxy motivation, access, prognosis, or other confounding factors
Patient/systemic risk evidence	Heterogeneous implant populations	Variation in underlying susceptibility and prognosis	Explains why identical maintenance resources may yield different outcomes	Risk factors cannot be converted into universal individual prediction rules
Post-treatment longitudinal evidence	Patients following active peri-implantitis treatment	Stability, recurrence, further bone loss, survival, and need for retreatment over time	Determines whether the starting state is clinically maintainable	Survival, disease resolution, stability, and recurrence are not interchangeable outcomes
Restorative–professional continuity evidence	Care distributed across restorative and periodontal responsibilities	Plausibility that responsibility and reassessment can become fragmented	Supports a proposed service-continuity mechanism for the refined theory	Direct comparative peri-implant trials of coordinated versus fragmented service models are lacking

The resulting evidence architecture therefore does not justify describing supportive peri-implant care as a standardized intervention with a single active ingredient. It is better characterized, at this stage of the synthesis, as a collection of resources delivered into heterogeneous clinical contexts. Whether those resources generate sustained engagement, effective self-care, meaningful reassessment, and timely response to deterioration requires examination of the context–mechanism–outcome configurations developed in the next section.

Context–mechanism–outcome configurations

Long-term follow-up after active peri-implantitis treatment showed that supportive care operates within a clinical state created by the preceding therapy. Five-

year follow-up demonstrated that continued supportive therapy can accompany sustained implant survival and clinical stability, but stringent success was not universal [24]. A systematic review likewise found that survival, success, recurrence, and disease resolution were reported inconsistently, making survival alone an inadequate indicator of maintenance effectiveness [25]. These findings support a first configuration: when active treatment produces a clinically maintainable condition, subsequent monitoring and self-care have a plausible opportunity to preserve stability; where active disease persists, the same maintenance resources may be insufficient.

Residual pathology strengthens this interpretation. Prospective evidence linked residual disease following surgical therapy with greater subsequent recurrence or progression [26]. Longer observational follow-up similarly demonstrated heterogeneous trajectories after surgery [27], while registry-based evidence showed that further bone loss can continue in subsets of treated implants [28]. Thus, apparent "maintenance failure" may partly represent persistence of an unfavorable biological starting state rather than failure of recall itself.

Treatment and defect characteristics also modify this context. Selected reconstructed defects can remain stable over five years [29], and long-term prospective evidence documents implant retention over a decade after reconstructive surgical management [30]. However, extended randomized follow-up continues to show heterogeneity in patient and implant responses [31]. Other surgical trials and prospective cohorts likewise demonstrate that improvement after active treatment depends on treatment configuration and patient selection [32]. Multimodal reconstructive approaches may produce favorable outcomes in selected populations [33], while long-term cohort evidence confirms that such stability cannot automatically be generalized to every peri-implant defect [34].

Across these studies, the most defensible mechanism is therefore not "attendance produces health." Continued attendance creates opportunities for surveillance, reinforcement, detection of deterioration, and timely escalation, but these resources operate differently according to residual disease, restoration accessibility, patient capability, and underlying susceptibility. Similarly, self-care can generate plaque-control benefits only when the patient can reach relevant surfaces and sustain the required behavior. Professional maintenance can compensate for some limitations but cannot reliably neutralize inaccessible prosthetic contours or unresolved pathology.

The candidate configurations derived from the synthesis are summarized in **Table 3**. They are deliberately conditional: no configuration represents a deterministic prediction rule.

Table 3. Candidate context–mechanism–outcome configurations explaining supportive peri-implant care

Clinical or service context	Programme resource	Candidate mechanism	Expected outcome pattern	Principal competing explanation
Stable, maintainable post-treatment tissues	Repeated professional reassessment	Deterioration is detected before extensive progression and care can be escalated	Greater likelihood of sustained stability	Favorable outcome may primarily reflect successful active treatment
Residual inflammation or deep peri-implant pockets	Routine maintenance visits	Reassurance or limited debridement may be insufficient to change the underlying disease state	Recurrence or continued progression despite attendance	Apparent maintenance failure may actually reflect incomplete disease control
Restoration permits effective patient and professional access	Technique instruction plus repeated reinforcement	Self-care becomes feasible and confidence/capability can be sustained	More reliable plaque control and monitoring	Highly motivated patients may independently maintain better outcomes
Restoration restricts access	Standard hygiene instruction and prophylaxis	Recommended behaviors cannot be translated fully into effective cleaning	Persistent local inflammatory burden or repeated treatment need	Baseline anatomy and disease susceptibility may contribute independently
Patient has adequate capability and continued care access	Structured recall and self-care support	Engagement, reinforcement, and timely help-seeking remain active	Continued participation and earlier response to change	"Healthy adherer" characteristics may partly explain the association

Care responsibility is fragmented between providers	Separate restorative and periodontal contacts	Ownership of reassessment and escalation may become ambiguous	Missed deterioration, delayed referral, or discontinuity	Direct comparative evidence for this service-level pathway remains limited

Refined programme theory

The synthesis supports a programme theory in which supportive peri-implant care is best understood as a conditional continuity process, not a fixed recall schedule. Periodontal supportive-care principles provide an important conceptual comparator, but biological and therapeutic differences mean that evidence from teeth cannot simply be transferred to implants without qualification [35]. The peri-implant programme begins with the condition produced by active treatment and must repeatedly reconnect four elements: a maintainable clinical state, hygienic accessibility, patient capability, and professional reassessment.

This interpretation also accommodates major rival explanations. Surgical access and pocket-elimination evidence shows that residual clinical conditions remain important after treatment and that recurrence cannot automatically be attributed to inadequate maintenance [36]. Reconstructive outcomes likewise depend on defect configuration and treatment context [37]. Surface-decontamination strategies show heterogeneous effects [38], and evidence for chemical [39] or antimicrobial adjuncts [40] does not establish a universally superior treatment pathway. Consequently, a supportive-care programme should not be judged without considering the biological state it inherits.

The refined theory further distinguishes resources from mechanisms. Recall appointments, instrumentation, hygiene devices, restorative review, and referral pathways are resources. They become effective only when they trigger useful responses: sustained self-care capability, recognition of change, engagement with follow-up, timely clinical decision-making, and escalation when disease control deteriorates. Frequency may influence how often these responses can occur, but current evidence does not identify a universally optimal interval.

A second refinement concerns continuity between restorative and periodontal services. Prosthetic design can affect cleansability, while periodontal clinicians may be responsible for surveillance and treatment of recurrent inflammation. If ownership is ambiguous, the patient can remain technically "in care" while no clinician assumes responsibility for integrating restoration accessibility, tissue status, and treatment escalation. Direct trials comparing coordinated with fragmented peri-implant service models are lacking; this pathway must therefore remain a proposed realist mechanism rather than an established causal effect.

Table 4 presents the final programme theories and their evidentiary boundaries.

Table 4. Refined programme theories for supportive peri-implant care and their implementation boundaries

Refined theory	Condition required for operation	Mechanism proposed	Interpretation for practice	Evidentiary boundary
Maintenance begins with maintainability	Active treatment leaves a state compatible with supportive care	Monitoring and self-care can act on controllable rather than uncontrolled disease	Reassess whether recurrence represents maintenance failure or unresolved disease	Treatment endpoint and maintenance effect remain difficult to separate
Access enables capability	Patient and clinician can physically reach relevant implant surfaces	Instruction can be translated into effective plaque control	Restorative accessibility belongs within maintenance assessment	Prosthetic associations do not prove deterministic causation
Attendance enables opportunity, not certainty	Patient remains engaged and services remain accessible	Repeated contact permits reinforcement, detection, and escalation	Interpret compliance as part of a wider care process	Confounding and healthy-adherer effects remain substantial
Continuity preserves responsibility	Clinical ownership remains explicit across restorative and periodontal care	Information, reassessment, and escalation remain connected over time	Clarify who monitors tissues, restoration accessibility, and recurrence	Direct comparative service-level evidence is limited

Risk modifies every configuration	Patient, implant, tissue, and treatment characteristics differ	The same resource generates different responses in different contexts	Individualize follow-up rather than applying a universal protocol	No validated universal risk-weighting system follows from this review

The refined programme theory is represented in **Figure 2** as a nonlinear constraint landscape rather than a sequence of universally ordered steps.

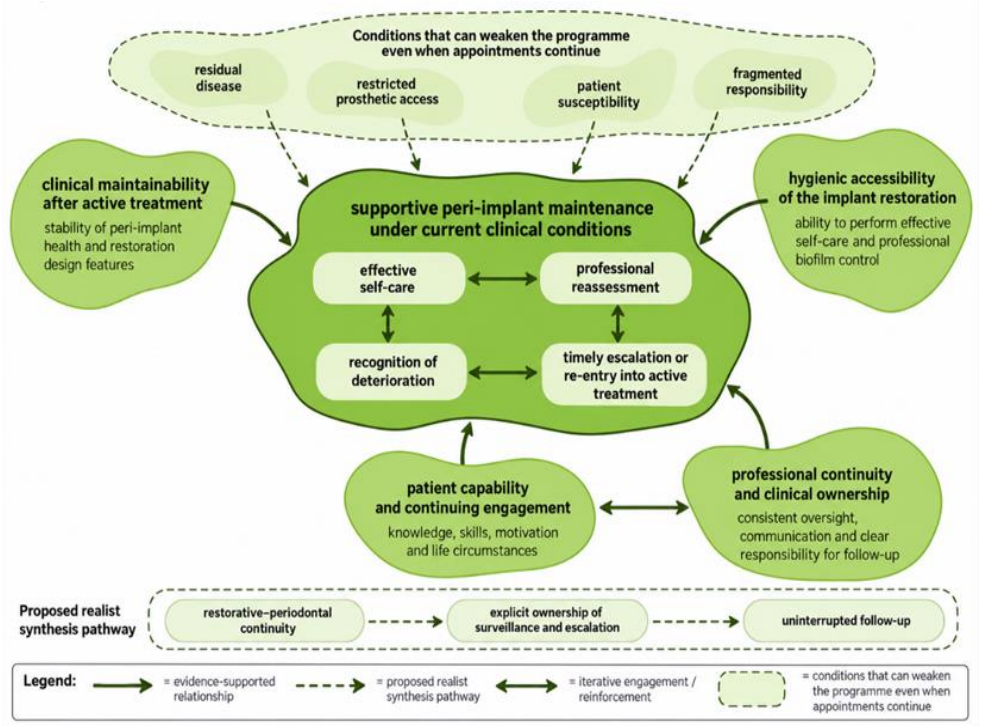


Figure 2. Conditional Maintenance Landscape Linking Clinical Maintainability, Access, Capability, and Continuity

Conclusion

Supportive peri-implant care succeeds or breaks down through interactions among the condition achieved after active treatment, accessibility for self- and professional care, patient capability and engagement, and continuity of clinical reassessment. Attendance remains important because it creates opportunities for surveillance, reinforcement, and escalation, but current evidence does not justify treating recall frequency as a sufficient mechanism or prescribing a universally optimal interval. Apparent maintenance failure may instead reflect residual disease, unfavorable restorative access, heterogeneous susceptibility, or discontinuity of responsibility. The resulting programme theory therefore reframes supportive care as an adaptive longitudinal system whose components must remain clinically usable and connected. Explicit coordination between restorative and periodontal services is a plausible component of that system, but its independent contribution requires direct prospective evaluation.

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