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Evaluating Home Healthcare Outreach through Population Coverage Referral Progress and First Visit Receipt

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Abstract
Home healthcare outreach requires measures connecting the target population with referral progress and service receipt. This conceptual analysis examines selected literature published through 2025 and proposes an indicator structure separating population coverage, stage conversion, first visit completion and subsequent care. Logic models and implementation frameworks inform the measurement architecture, while home health and transitional care studies identify distinct service endpoints and transfer limits. The framework defines index cohorts, outcome windows, event sources and unresolved cases. It also distinguishes service completion from clinical benefit and descriptive improvement from causal effect. A hypothetical calculation shows why a high final-stage conversion rate might coexist with low overall completion. Proposed evaluation designs include a controlled rollout with documented implementation and capacity. The contribution is a denominator-based reporting structure linked to programme decisions. The framework is unvalidated and does not supply a clinical outcome prediction, an effect estimate or a universal target for acceptable referral or visit performance.

Keywords: Home Healthcare Outreach, Program Evaluation, Awareness Indicators, Referral Measurement, Service Use, Health Equity, Measurement Framework

1. Introduction

Outreach creates opportunities to understand a service, ask for assistance and enter a care process. The care process then depends on clinical decisions, organisational handoffs and receiving capacity. A programme reporting only contacts misses its connection to service receipt. A programme reporting only visits misses the population absent from its process [1-4].

This paper develops a denominator-based evaluation structure. Its contribution is to link population coverage and stage conversion without treating them as interchangeable measures. Coverage concerns the share of the defined target population reached. Conversion concerns progress among people entering a particular step. Overall completion concerns the original cohort's endpoint. Each numerator and denominator must retain its meaning across reporting periods [5-15].

The application is home healthcare outreach. The framework does not judge more service use as inherently better, nor does it attribute later health outcomes solely to communication. An informed decision to decline, a revised clinical plan or appropriate alternative care should remain identifiable alongside first-visit receipt [16-42].

2. Research Method

2.1 Study question and evidence scope

This paper addresses the following question. How should an outreach evaluation distinguish population coverage, transition performance and appropriate service receipt without conflating them with clinical benefit?

The analysis draws on selected conceptual, measurement and empirical literature published no later than 2025. Sources are used according to their intervention, setting and outcome. Conceptual sources inform definitions and proposed relationships. Empirical studies inform the problem or an adjacent mechanism, with their findings kept within the evaluated intervention and population. The synthesis is interpretive and does not follow a registered systematic review protocol or provide an exhaustive study census [43-51].

The analytical procedure separates the target construct, the observation used to represent it and the claim supported by that observation. The resulting framework specifies process records, outcome boundaries and a prospective evaluation question. Design recommendations are identified as proposals. No participant dataset, new clinical results or validated composite score is reported, and no pooled effect is estimated from unlike interventions [50, 52-64].

The synthesis proceeds through three steps: Define the communication or service task, identify the observation supported by each relevant source, and specify a comparison which would test the proposed relationship. Table 1 records construct boundaries; Table 2 operationalises a study or audit. Numerical illustrations demonstrate definitions and accounting only. They are not empirical results [43, 65-71].

2.2 Synthesis and boundaries of application

Programme logic and RE-AIM provide structures for connecting activities, reach and outcomes [1, 72]. Participatory evaluation and implementation outcome distinctions inform reporting context and process [2, 73]. Engagement frameworks and measurement reviews concern involvement, a construct separate from visit receipt [74, 75]. These distinctions prevent a service activity count from becoming a general claim of engagement or benefit [76-85].

Li *et al.* [16] examine first home health receipt after referral. Fashaw-Walters *et al.* [5], Schwartz *et al.* [89] and Quigley *et al.* [5] examine agency access or differences in care across populations and contexts. Richardson *et al.* [5] address digital equity. The relevant implication is to specify the receiving service, access conditions and subgroup denominators rather than evaluate communication in isolation [50, 90-118].

Transitional care trials and syntheses examine interventions with several components and downstream outcomes [119-124]. Their findings inform evaluation questions, but they do not establish an outreach-only effect. In particular, the Balaban trial found no overall readmission difference and differing age-group results, cautioning against a general claim of navigation benefit [50, 62, 125-130].

Payment evaluations concern a different intervention and estimand [131, 132]. They provide methodological context for controlled policy evaluation, rather than evidence that outreach changes clinical quality. Campaign synthesis similarly concerns communication interventions rather than home health supply [133]. The proposed indicator structure preserves these intervention boundaries [88, 134-147].

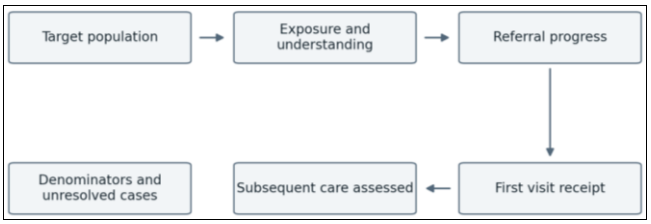
Snyder [40] examines campaign effects on behaviour. This literature reinforces the need to define the requested action and target audience in outreach evaluation. Campaign reach, referral acceptance and first-visit receipt are different outcomes. A programme should report each outcome with its own population and observation window rather than transferring an average campaign effect to a home healthcare pathway [87, 148-156].

Harrison *et al.* [16] describe patient and family contributions to a hospital research agenda, while Vanderhout *et al.* [159] describe contributions to core outcome development. These studies motivate involving end users in the choice of evaluation outcomes. Such consultation should complement the clinical and operational definitions of service receipt, not replace them with an overall satisfaction score [43, 68, 153, 160-192, 236, 239, 242, 245, 248].

Parker *et al.* [16] describe partnership reflection tools, and Scott *et al.* [19] synthesize community health worker programme reviews. These sources inform examination of how the outreach programme is organised. For the proposed evaluation, record the workforce tasks, resources and partnership decisions accompanying outcome changes. Such records help assess implementation differences without themselves establishing a causal effect [151, 193-201].

3. Results and Discussion

3.1 Coverage and Referral Evaluation Framework



Source: Author-developed conceptual framework. Arrows represent proposed relationships or process order, not estimated effects

Fig 1: Outreach coverage transitions and first visit receipt

Table 1: Outreach coverage transitions and first visit receipt measurement boundaries

Stage	Indicator	Denominator	Permitted interpretation
Exposure	Unique people reached	Defined target population	Documented coverage
Awareness	Correct understanding of service option	Survey respondents with sampling described	Measured knowledge in the sampled group
Referral	Accepted referrals	Referrals with recorded disposition	Acceptance conditional on reaching referral
Service use	First completed visit	Initiated referrals or accepted referrals stated explicitly	Completion under the chosen denominator
Continuity	Subsequent planned care received	People starting care and eligible for follow-up	Continuation conditional on starting care

Table 1 provides an analytical specification. Its entries are proposed distinctions rather than empirical ratings or validated instrument properties.

3.1.1 Cohorts windows and the outcome sequence

Define the target cohort, its entry date and the service objective. A referral cohort supports analysis after referral, while a community target cohort supports a broader coverage question. Do not replace one denominator with the other when presenting improvement. Fig 1 shows the proposed outcome sequence, and Table 1 defines the indicator boundaries [131, 202].

Choose an observation window appropriate to the clinical and operational question. Record its rationale before reviewing outcomes and retain later completion separately. A short window addresses prompt receipt; a longer window addresses eventual receipt. Different windows will produce different completion rates without any change in programme performance. Record death, readmission, alternative care and changed preference where available, since these events affect interpretation of nonreceipt.

3.1.2 Exposure understanding and referral events

Exposure should represent a specified observation, such as acknowledged receipt, participation in a conversation or a

logged encounter. Impressions are delivery opportunities rather than confirmed understanding. A comprehension assessment should test the service facts and next step the programme intended to communicate. Report the sample and response rate; a survey among respondents is not an outcome for all exposed people [203].

Referral measurement should separate order initiation, transmission, acknowledgment, decision and scheduling. A written order and a transmitted order have different evidence sources. Retain the receiving agency's decision and available reason. A missing event requires reconciliation rather than automatic assignment to failure or success. Status records should identify the actor, time and whether information was recorded contemporaneously or reconstructed [50, 204, 205].

3.1.3 Conditional conversion and overall completion

Report each transition as completed next events divided by entrants to that step, alongside the original-cohort completion rate. In a hypothetical cohort of 100 people, 60 have a transmitted referral, 30 receive acceptance and 27 receive a first visit. Acceptance-to-visit conversion is 90%, while original-cohort completion is 27%. The example contains illustrative arithmetic only. The high final-stage rate does not describe the entire pathway [206].

If 10 original cases have unresolved outcomes, distinguish the recorded completion proportion from a complete-outcome estimate. Simple bounds show the range obtained if none or all unresolved cases completed the endpoint. Those bounds do not explain the missingness, but they prevent a selected set of known outcomes from being presented as the whole cohort. Where repeated referrals occur, specify whether the unit is a person, episode or referral and report duplicates.

3.1.4 Service receipt benefit and equity

First-visit receipt is an access outcome. Appropriateness requires separate clinical assessment. Subsequent visit continuity, patient experience and health outcomes require additional definitions and follow-up. A service record indicating more visits does not establish better care; the relevant question is delivery of appropriate care under the plan [207, 208].

Prespecify equity strata relevant to the service question and feasible data. Report counts, coverage, completion and unresolved shares within those strata. Describe any suppression and combine categories only with an explicit rationale. A pooled improvement might reflect a change in population composition. Show a stable-cohort comparison or composition-adjusted analysis where appropriate, while retaining the unadjusted counts needed to understand the programme's actual reach.

3.1.5 Evaluation designs and decision rules

A controlled rollout offers one prospective design. Assign or define comparable service units, collect baseline outcomes under a stable definition and document intervention timing. Record capacity, staffing and concurrent policy changes. Estimate the effect of the offered package using the comparison specified in advance. Interrupted time-series and difference-in-differences analyses require their own assumptions, including attention to underlying trends and concurrent interventions [209].

Operational rules should trigger investigation rather than substitute for causal inference. Rising unresolved status prompts reconciliation. Worsening delay prompts review of the affected stage. A widening subgroup gap prompts examination of opportunity and service conditions. Improvement under an uncontrolled dashboard supports operational learning, but does not demonstrate effectiveness. Expansion requires consideration of outcome evidence, implementation, burden and access consequences together [159, 210, 211].

3.1.6 Measurement reliability and a prespecified analysis

A data dictionary should define each event, permissible status, timestamp source and reporting unit. Test whether independent reviewers interpret a sample of records consistently. A field completed in every record might still have poor validity if it does not represent the intended event. Completeness and agreement are therefore separate measurement properties, and both belong in the pilot report.

Record revisions to definitions and extraction procedures. An apparent improvement after introducing a new definition should be analysed as a potential measurement change. Where feasible, recalculate earlier periods under the revised definition and show the comparison. If this is impossible, mark the discontinuity rather than present a seamless trend [212].

The primary analysis should identify the estimand, cohort, comparator and observation window before outcome review. For an offered outreach package, retain people assigned or eligible for the offer even if they never engage. A separate received-service analysis can describe users, but it should not replace the assigned comparison. This distinction is especially important where the offer targets people with incomplete prior contact [213].

Stage analysis is diagnostic rather than an automatic decomposition of causal effects. Improvements at several stages might reflect the same changing population or an external increase in capacity. Conversely, a decline at an early stage could accompany more appropriate screening and fewer unnecessary referrals. Clinical assessment, event records and participant accounts help interpret these patterns without treating conversion as inherently desirable [50].

Missing outcomes should be reported by group and stage. Examine whether unresolved records concentrate among certain agencies, languages or contact routes. Sensitivity analyses should assess plausible outcomes for the missing cases and state the assumptions. Imputation or adjustment does not remove the need to describe what is unknown and why the chosen method is appropriate.

The final report should present the primary comparison, uncertainty, implementation evidence and prespecified secondary outcomes before exploratory findings. Explain how observation changes the programme decision. Additional outreach, a process correction and a capacity response are different actions. A numerical improvement without a stable comparison or adequate measurement should guide further investigation rather than support an unrestricted claim of programme benefit [214, 215].

3.1.7 An estimand and a decision linked reporting set

An evaluation should name the effect it seeks before choosing indicators. For example, the primary estimand might be the difference in first-visit receipt within a prespecified window among all eligible discharge episodes offered a defined outreach package versus the comparison process. The target cohort, offer, endpoint and window form one statement. Reach, assistance uptake and referral status then explain delivery rather than compete as interchangeable primary outcomes. Logic models, RE-AIM and implementation outcome distinctions support this architecture [1, 2, 72]. [216].

Table 2 separates an illustrative pathway into its denominators. Among 200 target episodes, 120 receive a documented contact, 90 produce a referral, 72 receive acceptance, and 60 receive a first visit. Contact coverage is 60 percent. Referral-to-visit completion is approximately 66.7 percent. Acceptance-to-visit completion is approximately 83.3 percent. Overall first-visit coverage is 30 percent. These are hypothetical calculations. The favourable final-stage rate does not describe the experience of the 140 episodes without a confirmed first visit.

Table 2: Hypothetical pathway denominators for outreach evaluation

Stage	Illustrative count	Relevant rate
Target episodes	200	Original cohort
Documented contact	120	60 percent of target cohort
Referral	90	45 percent of target cohort
Agency acceptance	72	80 percent of referrals
First visit	60	83.3 percent of accepted referrals
First visit across target cohort	60 of 200	30 percent overall coverage

Source: Author-developed analytical example. Numerical values, where shown, are hypothetical and do not represent study observations

The principal comparison should retain the original cohort and the assigned offer. Alternative care, informed withdrawal and death require prespecified handling consistent with the clinical question, rather than retrospective exclusion because they lower conversion. Time-to-event analysis requires attention to competing events and incomplete observation. A simple fixed-window proportion answers a narrower question but still needs complete definitions and an account of unknown outcomes. First-visit research provides a direct service endpoint, while transitional care trials address broader intervention packages [86, 119, 121]. [217-221].

Evaluation of a controlled rollout should document the assignment process and whether service units differ before implementation. Calendar time, staffing, eligibility changes and receiving capacity affect interpretation. A before-and-after improvement without a comparison describes a trend. A comparative time-series analysis depends on stable recording, adequate preintervention observations and credible assumptions about concurrent changes. Payment policy evaluations illustrate different controlled designs, but their intervention is payment policy and their results do not establish an outreach effect [131, 132]. [222, 223].

Reporting should connect each indicator with a decision. Low documented reach calls for examination of delivery and the target denominator. High reach with low understanding calls for content assessment. Complete referrals with unresolved receipt call for handoff review. Accepted requests without visits call for scheduling and capacity review. These are diagnostic starting points, not conclusions about the cause. Patient and family accounts should examine the explanation and burden accompanying each stage, with research-priority and outcome-development studies informing participation in evaluation design [157, 158]. [89, 224-226].

The framework's added value is the requirement that a favourable result retain its denominator and corresponding decision. Equity assessment should describe who receives the offer, who reaches the endpoint and who remains absent, using both counts and rates. Community-engaged implementation research supports examining partnership processes and local context [50, 227]. A programme should expand only after the defined comparison supports its intended endpoint and the process evidence shows a feasible workload. An accurate negative or inconclusive result still supports a decision when its measurement, uncertainty and limits are explicit [228-231, 237, 240, 243, 246, 249].

Home healthcare outreach operates in a context where the service itself is complex and the population it serves is heterogeneous. Services are delivered in the home, which means that access depends not only on the availability of the service but on the circumstances of the household, including housing conditions, the presence of a caregiver, the ability to arrange the home for care and the practical demands on the resident's time. Outreach must therefore address a wider range of considerations than a message about a clinic appointment would require, and the pathway from awareness to receipt involves steps that may be unfamiliar to the people being reached. A programme that assumes a straightforward relationship between informing someone and serving them will misjudge the work involved and will be disappointed by its results. Understanding the pathway, and designing outreach that corresponds to it, is the foundation of effective practice.

Programme theory provides the conceptual bridge between outreach activities and the outcomes they intend to produce. A theory of change states the assumptions that connect each activity to the next link in the chain, from exposure through awareness, intention, referral, acceptance and first visit. When these assumptions are made explicit, they can be examined rather than presumed, and the measures chosen for evaluation follow logically from them. A programme that assumes awareness leads reliably to referral, for example, will be surprised when awareness increases without referral, whereas a programme that treats the transition as an assumption to be tested will measure it directly and learn where the chain breaks. Specifying a theory of change also clarifies which indicators are relevant at each stage and prevents the common error of measuring an early outcome and presenting it as evidence of a later one.

Population coverage connects outreach to the distribution of services and to questions of equity. Coverage describes the proportion of a defined target population that the programme reaches, and it is meaningful only when the target population is specified. A programme might target all residents of a service area, or those above a certain age, or those with particular conditions, or those who have been discharged from hospital. Each definition yields a different coverage figure and a different assessment of performance. Coverage is also sensitive to changes in the underlying population, so that a figure that improves may reflect a shrinking denominator rather than expanding reach. The framework recommends that target populations be defined in advance, that coverage be reported in relation to them, that changes in the population be accounted for in interpretation, and that coverage be disaggregated by segment where the programme intends to serve a diverse constituency.

Referral progress describes movement along the pathway and is distinct from the volume of referrals generated. The volume of referrals indicates activity, while progress indicates whether referrals move toward completion. A

programme that generates many referrals, none of which are accepted, has activity without progress, and a programme that generates few referrals that are all completed has progress with limited reach. Measuring progress requires defining the stages of the referral process, recording when each is reached and identifying where referrals stall or fail. This information allows a programme to target its improvement efforts at the stage that constrains the outcome, rather than addressing the process as a whole. It also allows the programme to distinguish between failures that it can influence, such as the quality of the referral or the support provided to the patient, and those that lie in the service system, such as capacity constraints or acceptance criteria over which it has little control.

First visit receipt is the outcome that most directly indicates whether outreach has contributed to access, and it is also the outcome most dependent on factors beyond the programme's control. A referral may be accepted and an appointment scheduled, and still not result in a visit, because the patient's circumstances changed, because transport failed, because the appointment was inconvenient, or because the service cancelled. Measuring receipt therefore requires attention to the reasons a visit did not occur, since the distribution of those reasons indicates whether the constraint lies in outreach, in the patient's circumstances or in the service. The framework recommends that receipt be measured against a defined window, that reasons for non-completion be recorded where possible, and that receipt be interpreted in relation to service capacity, since a programme cannot improve an outcome that the service is unable to deliver regardless of the quality of its communication.

Interpretation of the three indicators requires that they be read together rather than in isolation. A rise in coverage accompanied by flat referral progress suggests that awareness is not translating into action, and it points to a need for better information about how to initiate a referral or greater assistance in doing so. Strong referral progress with weak first visit receipt suggests obstacles in the service system, and it points to capacity, scheduling or support rather than to communication. Low coverage with strong receipt suggests that the programme serves a narrow population well, and it raises the question of whether the target population has been defined appropriately. Reading the indicators as a set allows a programme to form a defensible diagnosis and to choose an intervention matched to it, rather than responding to a single figure that may reflect several different problems. This diagnostic use of the indicators is the framework's principal practical value.

Constraints on measurement must be acknowledged because they shape what a programme can learn and what it can claim. Data on coverage, referrals and visits may reside in different systems that are difficult to link, and privacy rules may limit what can be combined. Some referrals may be made outside the programme and therefore be invisible to it. Some visits may be recorded in systems the programme cannot access. The framework recommends that programmes report what they can observe, state clearly what they cannot, and avoid inferring success at one stage from evidence at another. Where linkage is impossible, sequential reporting of coverage, referral and receipt still provides a coherent picture, provided the limitations are made explicit. Recognising these constraints is part of responsible evaluation and prevents the common practice of claiming service outcomes on the basis of activity data alone.

Over time, the value of the framework depends on its use in a cycle of measurement and improvement. A programme that measures the three indicators, interprets them together, adjusts its approach where the evidence indicates, and measures again will learn what works in its particular setting. This cycle requires commitment to regular review, openness to findings that contradict expectations and willingness to change course. It also requires that results be communicated to the partners and communities involved, since improvement depends on their participation and their confidence that the programme is examining its own performance honestly. The framework does not prescribe a single best outreach approach; it prescribes a way of observing whether an approach is working, so that programmes can adapt to the populations and services they actually encounter rather than to an idealised model of how outreach is supposed to function.

The evidence on outreach programmes indicates that their effects depend substantially on the outcome measured and the pathway stage examined. Programmes that measure awareness frequently report success, because awareness is relatively easy to increase. Programmes that measure completed service use report more modest effects, because completion depends on factors beyond communication, including service availability, eligibility, and the practical circumstances of the population. This pattern is consistent with the framework advanced here and with the broader finding that communication alone rarely closes the gap between knowledge and behaviour. It supports the recommendation that outreach be evaluated at multiple stages and that the stage at which a programme acts be distinguished from the outcomes it ultimately influences. A programme that improves awareness has achieved something real, but presenting that achievement as an improvement in access overstates its effect.

Service capacity is a recurring constraint and deserves explicit attention in programme design rather than being treated as an external factor. Where a service cannot accommodate the demand that outreach generates, additional communication produces frustration rather than access, and the programme's reputation suffers along with that of the service. Where capacity is limited, a programme may choose to calibrate its outreach to what the service can absorb, to sequence its activities so that demand is spread over time, or to invest in expanding capacity before scaling outreach. Each of these choices has implications for the programme's objectives and for how it should be evaluated. The framework recommends that capacity be assessed as part of planning, that outreach be designed in relation to the capacity available, and that capacity constraints be reported when they limit what the programme can achieve, since otherwise the programme may be judged on outcomes it could not influence.

Continuity of engagement affects whether outreach produces lasting results, and it is often neglected in programmes that are evaluated over short periods. A person who is reached, referred and served may later require further support, and a programme that disengages after the first contact may find that early gains are not maintained. Continuity requires that the pathway extend beyond the first visit to include follow-up, that support be available when circumstances change and that the system be able to re-engage people who have disengaged. The framework recommends that follow-up be considered as part of the

pathway, that its contribution be measured alongside earlier stages, and that the resources required for continuity be planned rather than assumed. Where continuity is maintained, the benefits of outreach are more likely to persist; where it is not, the programme may achieve a series of first visits without producing the sustained access that the service intends.

Partnership with community organisations and other services extends the reach of outreach and improves its ability to resolve practical obstacles. Community partners reach populations that formal programmes may not, they provide the trust that supports engagement and they can assist with the practical steps that stand between intention and receipt. Partnership also brings obligations, including realistic resourcing, respect for partners' expertise and transparency about how their contribution is used. The framework recommends that partnership be planned as part of the outreach design, that partners be involved in defining objectives and measures, and that their contribution be recognised in how the programme is evaluated. Where partnership is genuine, it improves both reach and completion; where it is nominal, it adds administrative burden without producing the benefits that partnership is meant to deliver.

Ethical considerations in outreach include respect for the autonomy of the people being reached, honesty about what the service can provide and care in how information about individuals is used. Outreach may involve contacting people who have not sought contact, and the manner of that contact should respect their preferences about privacy and their right to decline. Programmes should be clear about what the service offers and what it does not, so that people are not drawn into a process that cannot meet their expectations. The collection of information about individuals for outreach purposes carries obligations regarding consent, storage and use, and the framework recommends that these be addressed explicitly. Where programmes handle personal information, they should be able to explain to the people concerned what is collected, why and for how long, and they should be prepared to act on requests about their information.

Communication with the population served is part of outreach and shapes whether people engage with the pathway. Information should be clear about what the service offers, who is eligible, what the process involves and what the person can expect, so that those who respond are prepared for what follows. Communication should also be available in the languages and formats that the population uses, and it should be accessible to people with disabilities. Where communication is unclear or incomplete, people may begin a process they cannot complete, which wastes their time as well as the service's resources. The framework recommends that communication be tested with members of the target population before it is used at scale, that it be reviewed as services change and that feedback from people who have been through the pathway be used to improve it. Clear communication is a precondition for the informed engagement on which the pathway depends.

The framework's practical contribution is to replace a single ambiguous claim of success with three indicators that describe different stages of the pathway and that can be interpreted together. Coverage shows whether the programme reaches its intended population, referral progress shows whether those reached move toward the service and first visit receipt shows whether they arrive. Read as a set, they locate the points at which people are lost and direct improvement effort to the stage that requires attention.

Programmes that adopt the framework should expect to measure more than they may be accustomed to, and to find that some stages perform better than others. That pattern is informative rather than discouraging: It shows where the programme's effort is effective and where it is not. Using the indicators diagnostically, rather than as a scorecard, is what allows a programme to adjust its approach in response to evidence and to demonstrate that its outreach is contributing to access.

Finally, the framework acknowledges that outreach operates within a service system whose capacity constrains what can be achieved. Measuring first visit receipt makes this constraint visible, and it prevents a programme from being judged on outcomes it could not influence while also preventing it from claiming success that belongs to the service. Being honest about the boundary between what the programme does and what the service delivers is part of responsible evaluation and part of the credibility on which sustained support depends.

3.2 Discussion of Denominators and Study Limits

The framework makes denominators part of the finding. A service programme might improve conversion among participants while reaching fewer people with substantial barriers. It might broaden coverage and temporarily lower conditional conversion because the entry population changes. Reporting both avoids a false choice between these observations and identifies the question requiring further assessment [232, 233, 251-270].

The evaluation should distinguish measurement improvement from process improvement. Reconciliation might identify visits missing from earlier records, raising recorded completion without increasing delivered care. A new data source might also change the apparent denominator. Document these changes and assess their effect before interpreting a time trend.

The framework has no validated indicator set or universally acceptable performance threshold. Cohort definitions, care plans and data sources vary, while clinical outcomes depend on factors outside outreach. A pilot should test event agreement, completeness and staff burden. A comparative study should then estimate an intervention effect for a defined cohort, with uncertainty, implementation evidence and competing explanations reported alongside the result [234].

The framework addresses the central difficulty facing home healthcare outreach, namely that awareness, referral and service receipt are different outcomes that are frequently reported as though they were the same. A campaign that raises awareness without generating referrals has not improved access, and a programme that generates referrals no one receives has not delivered care. By measuring population coverage, referral progress and first visit receipt as distinct indicators, the framework allows a programme to identify where the access pathway breaks down and to direct corrective effort accordingly. This separation is the framework's principal practical contribution, because it converts a single ambiguous success claim into a set of diagnostic questions. It also makes it possible to compare the performance of different outreach approaches on the basis of where each adds value, rather than on the basis of a general impression of effectiveness.

The framework draws on established evaluation logic in recommending that measures be linked to an explicit programme theory. Outreach activities are intended to produce a chain of effects, beginning with awareness in a defined population and ending with service receipt and, where relevant, subsequent health outcomes. Specifying this chain in advance makes the choice of indicators a matter of logic rather than convention, and it clarifies which results count as evidence of success at each stage. It also exposes assumptions that might otherwise remain unexamined, such as the belief that awareness reliably leads to referral or that referral reliably leads to a visit. Where those assumptions fail, the programme learns something valuable about the population and the service system rather than merely recording a disappointing total. Evaluation designed in this way supports learning as well as accountability, which matters for a field in which interventions are often adapted as they are implemented.

Population coverage deserves particular emphasis because it connects outreach to equity. A programme may achieve strong engagement among people already familiar with the service while the populations with the greatest unmet need remain untouched. Measuring coverage against a defined target population, disaggregated where possible by segment, reveals whether outreach is broadening access or reinforcing existing patterns of use. The framework recommends that target populations be specified in advance and that coverage be reported in relation to them rather than in absolute terms. It also recommends attention to the denominator, since a rate calculated against an inappropriate population can flatter or understate performance. Reporting coverage transparently, including uncertainty in the underlying population estimates, allows readers to interpret results correctly and allows programme managers to see whether they are reaching the people they intended to serve.

Finally, the framework acknowledges the practical constraints that shape what can be measured. First visit receipt depends on service capacity as well as on outreach, so a programme may be unable to improve the final indicator regardless of the quality of its communication. Data on referrals and visits may reside in different systems that are difficult to link, and privacy rules may limit what can be combined. The framework therefore recommends that programmes report what they can observe, state clearly what they cannot, and avoid inferring success at one stage from evidence at another. Where linkage is impossible, sequential reporting of coverage, referral and receipt still yields a coherent picture, provided the limitations are made explicit. Recognising these constraints is part of responsible evaluation, and it prevents the common practice of claiming service outcomes on the basis of activity data alone.

Applying the framework over time requires programmes to interpret their indicators in relation to one another rather than in isolation. A rise in coverage accompanied by flat referral progress suggests that awareness is not translating into action, while strong referral progress with weak first visit receipt points to obstacles in the service system itself. Reading the three indicators together allows a programme to form a defensible account of where the access pathway is failing and to choose an intervention matched to that diagnosis. The framework recommends that results be reviewed collectively at regular intervals and that the review consider the interaction between outreach and service capacity, since a programme may be unable to improve receipt regardless of the quality of its communication. It also recommends that changes in the underlying population be taken into account, because coverage measured against a shifting denominator can appear to improve or decline for reasons unrelated to programme performance. These interpretive practices turn a set of indicators into a diagnostic instrument rather than a scorecard.

The framework's practical value lies in its insistence that outreach be judged by what happens to people rather than by what the programme does. Coverage, referral progress and first visit receipt describe different stages of one pathway, and a programme that measures all three can explain its performance instead of merely reporting it. Reading the indicators together, accounting for service capacity and population change, and reporting what could and could not be observed together produce an evaluation that supports learning and accountability at the same time. Where a programme adopts this approach, it is better placed to direct its effort to the stage that matters and to demonstrate to funders and communities that outreach is contributing to access rather than only to awareness.

4. Conclusion

This paper has argued that home healthcare outreach should be evaluated through three distinct indicators, namely population coverage, referral progress and first visit receipt, because these represent different outcomes that are often conflated in a single success claim. Measuring them separately allows a programme to locate the point at which the access pathway breaks down and to direct improvement effort to the stage that actually requires attention. The framework recommends that indicators be selected in relation to an explicit programme theory, so that the choice of measures follows from the chain of effects the programme intends to produce and so that failures illuminate assumptions rather than merely producing disappointing totals. It gives particular emphasis to population coverage, calculated against a defined target population and disaggregated where possible, because coverage connects outreach to equity and shows whether expansion is reaching those with the greatest unmet need. Finally, it acknowledges the capacity, data and linkage constraints that limit measurement and advises transparent reporting of what was observed and what was not, so that evidence at one stage is not used to claim success at another. Reading the indicators together, and accounting for service capacity and population change, will determine whether evaluation guides improvement or merely records it.

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