

Health Information Interoperability in Latin America and the Caribbean: A Critical Narrative Review of Implementation Barriers, Facilitators, and Rural Evidence Gaps

Type: Review Article

Received: September 19, 2026

Published: October 27, 2026

Citation:

Henry A. Montero, LMHC, CASAC-M, CTTS. "Health Information Interoperability in Latin America and the Caribbean: A Critical Narrative Review of Implementation Barriers, Facilitators, and Rural Evidence Gaps". PriMera Scientific Medicine and Public Health 9.4 (2026): 03-12.

Copyright:

© 2026 Henry A. Montero, LMHC, CASAC-M, CTTS. This is an open-access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Henry A. Montero, LMHC, CASAC-M, CTTS*

LMHC, CASAC-M, CTTS, Alquimede Mental Health Counseling, New York, USA

***Corresponding Author:** Henry A. Montero, LMHC, CASAC-M, CTTS, Alquimede Mental Health Counseling, New York, USA.

Abstract

This critical narrative review examines implementation barriers and facilitators, quantitative evidence, and rural representation in health information interoperability across Latin America and the Caribbean. A purposive corpus of 16 distinct sources was interpreted by evidence type, implementation stage, outcome unit, and rural reporting. Recurring themes included standards, governance, vendor dependencies, financing, workforce capacity, and institutional readiness. Technical demonstrations and participation counts documented activity but did not establish sustained clinical use or exchange success rates. Quantitative findings measured different constructs and units, so no pooled estimate was calculated. Rural evidence included reported connectivity barriers and an offline synchronization approach, but the reviewed corpus did not support a regional rural-urban effectiveness estimate. Future evaluations should report validated exchanges with explicit denominators, distinguish testing from routine use, and describe rural definitions and subgroup outcomes. This is a purposive narrative synthesis, not an exhaustive systematic review or meta-analysis. Within the reviewed corpus, missing rural subgroup outcomes represent an evidence gap rather than proof of poor rural implementation.

Keywords: Health information exchange; Interoperability; Latin America and the Caribbean; Implementation; Rural health

Introduction

Health systems require information to remain usable when patients move between organizations, levels of care, or jurisdictions. Installing electronic records does not by itself establish that receiving clinicians can retrieve and interpret information generated elsewhere. Regional discussions therefore connect technical infrastructure with governance, institutional participation, workforce preparation, and sustained financing (Bastias-Butler & Ulrich, 2019; Lima-Toivanen & Pereira, 2018).

The available literature is diverse. It includes proposed architectures, operational case studies, controlled interoperability exercises, surveys of digital technology, and regional policy discussions. These materials address different questions. A standards proposal can establish a design rationale; a demonstration can establish feasibility under specified conditions; and an observational survey can describe associations. None alone establishes the population-level effect of routine health information exchange.

This review addresses three questions: What barriers and facilitators shape implementation? Which quantitative findings can be interpreted as interoperability outcomes? How are rural settings represented and evaluated? The objective is to critically interpret a selected regional evidence corpus and propose a coherent measurement agenda. The scope covers health information systems without a specialty restriction.

Materials and methods

The final narrative corpus comprised 16 distinct sources: 15 unique supplied documents and one additional primary study of a Brazilian interoperability platform. Duplicate copies were counted once. These are source-document counts, not counts of independent intervention studies. The journal template, earlier drafts, and unscreened database records were excluded from the evidence corpus.

Targeted reading examined methods, implementation descriptions, numerical results, rural reporting, and limitations. Bibliographic details were checked against the supplied documents and available publisher records. Exploratory PubMed searches on September 18, 2026 retrieved 166 unique records; the 36 records from the 2026-only search were a subset of those 166. Neither set represents screened or included studies, and neither defines the 16-source narrative corpus.

The author reported September 26, 2026 as the date for 14 Google Scholar search strategies (Appendix A). Their result lists and counts were not independently verified. No completed systematic search and selection process, formal dual screening, standardized risk-of-bias scoring, or certainty grading is reported. One reviewer conducted this project; AI assistance did not constitute independent review.

Health information interoperability is operationally defined here as the demonstrated or explicitly designed ability of two or more technically or organizationally distinct systems to exchange health information and enable its receipt, interpretation, or use. Health information exchange denotes the exchange activity; electronic health record (EHR) interoperability applies this capability specifically to EHR systems. Digital health is the broader use of digital technologies for health and does not itself demonstrate intersystem exchange.

Interpretation distinguishes foundational transmission, structural or syntactic consistency, semantic meaning, and organizational arrangements. A reference to a standard does not establish conformance. Digital technology use without a described exchange boundary is treated as contextual evidence.

Sources were distinguished as proposed designs, controlled tests, operational implementation accounts, observational studies, secondary syntheses, or policy and conference reports. Numerical findings were interpreted according to their reported denominator and unit. Counts of patients, records, attributes, resources, institutions, and countries were not treated as interchangeable. Successful exchange would require completed and validated exchanges divided by attempted exchanges over a defined period, with the validation procedure and retry rules specified. The reviewed measures were not sufficiently compatible to support a defensible pooled estimate within this corpus.

Rural evidence was examined for setting representation, the definition of rurality, and separate rural outcomes or rural–urban comparisons. Missing subgroup results were treated as missing evidence within this corpus, not evidence of poor rural performance. Table 1 identifies all 16 sources and their evidence types. Gaudin et al. (2024) informed interpretation of geographic classifications; settings lacking geographic data were not retrospectively reclassified.

<i>Source</i>	<i>Evidence type</i>	<i>Contribution and role</i>	<i>Principal limit</i>
Silva et al. (2017)	Technical design	Ecuador EHR architecture; standards-based design	Proposed architecture is not a comparative effectiveness study.
Friedmann (2022)	Implementation case study	Uruguay national EHR case study; governance and deployment	Descriptive case account; no causal rural–urban estimate.
Ministerio de Salud Pública y Asistencia Social, República Dominicana (2026)	Controlled exercise report	Pre-Conectatón executive report; controlled exercise	Resources and institutions do not supply attempted-exchange denominators.
Ramirez et al. (2026)	Technical and policy report	Regional trust-network technical report; contextual evidence	Readiness and governance are not clinical outcomes.
Lima-Toivanen and Pereira (2018)	Comparative case analysis	Selected-country primary-care eHealth analysis; contextual evidence	Heterogeneous country sources; broader than interoperability.
Capasso et al. (2024)	Mixed-methods observational study	Facility survey and interviews on maternity-care ICT; contextual evidence	Technology use is not necessarily intersystem exchange.
LeRouge et al. (2019)	Observational study	Observational hospital study in nine nations; contextual evidence	Telemedicine adoption is the outcome; association is not causation.
Miyoshi et al. (2018)	Platform development and evaluation	Brazilian platform development and data integration	Attribute-level changes are not patient-level effects.
Bastias-Butler and Ulrich (2019)	Policy report	Regional policy dialogue on EHRs; contextual evidence	Implementation guidance rather than effect estimation.
Cabrol and Pombo (2021)	Policy report	Cross-sector digitalization policy report; contextual evidence	Secondary contextual evidence.
Doane et al. (2026)	Conference report	ONE Caribbean conference report; contextual evidence	Agreed priorities are not verified deployment results.
Espina (2025)	Bibliometric analysis	Bibliometric analysis of digital public health; contextual evidence	Publication patterns do not measure implementation prevalence.
Lizarzaburu et al. (2026)	Narrative review	Narrative synthesis of analytics in Peru; contextual evidence	Secondary synthesis, not independent primary effect data.
Valdés and Lecaros (2024)	Policy and practice review	Biobank interoperability and research governance; contextual evidence	Research-data setting differs from routine clinical exchange.
Office of Evaluation and Oversight (2024)	Country-program evaluation	Dominican Republic country-program evaluation; contextual evidence	Social-protection interoperability is adjacent to clinical exchange.
Gaudin et al. (2024)	Geographic methods report	Rurality methods in Mexico and Panama; contextual classification framework; contextual evidence	No health information exchange evaluation or rural effectiveness estimate.

Table 1: Source corpus and interpretive role.

Findings

The corpus describes implementation at several stages and offers more detail about enabling conditions than comparable effects. Its convergence around governance, standards, financing, and workforce should be interpreted as recurring themes in selected documents, not as a measured regional ranking of barriers. Table 2 summarizes these themes and distinguishes reported experience from proposed responses.

Standards and usable information

The Ecuador architecture describes a standards-based approach involving ISO 13606 archetypes and clinical terminology (Silva et al., 2017). Its contribution is an explicit design for structuring information. It does not establish that the proposed components achieved sustained cross-institutional use. Similarly, technical compatibility should be separated from semantic usability: a message may arrive and conform to a schema while remaining difficult to interpret clinically.

Uruguay's case study describes substantial national coordination and the difficulty of connecting heterogeneous provider systems. It also reports limitations in the structured information available through registered clinical events (Friedmann, 2022). This illustrates why access to documents and access to consistently structured, computable information should be evaluated separately. Neither capability should be inferred solely from the presence of an electronic record system.

Governance, trust, and institutional coordination

The regional trust-network report connects cross-border exchange with legal arrangements, institutional responsibilities, and technical trust mechanisms (Ramirez et al., 2026). These arrangements address who participates, who establishes rules, and how exchanging parties can rely on one another. Their existence is an enabling condition rather than proof that information is consistently available at the point of care.

The ONE Caribbean conference report documents regional priorities and capacity needs (Doane et al., 2026). Its recommendations are valuable for identifying an implementation agenda, but conference commitments cannot be counted as completed country deployments. The biobank discussion likewise emphasizes governance and evidence quality, although research-data arrangements cannot be assumed to produce the same outcomes as clinical exchange (Valdés & Lecaros, 2024).

Vendor dependencies, financing, and workforce

The Dominican Republic's Pre-Conectatón exercise on August 27, 2026 involved 16 institutions: 11 private and five public. The report describes more than 75 Fast Healthcare Interoperability Resources (FHIR) resources created and used (Ministerio de Salud Pública y Asistencia Social, República Dominicana, 2026, section 3, "Resultados alcanzados," unnumbered summary table). Section 4 identifies vendor development outside existing contracts, administrative and financing delays, and differences in technical autonomy and readiness. These observations document contractual and organizational dependencies during a controlled exercise. They do not establish sustained national production exchange.

Uruguay's experience links provider participation with investment, connectivity, training, and change management (Friedmann, 2022). Regional policy documents similarly place workforce and institutional arrangements alongside technology (Bastias-Butler & Ulrich, 2019; Cabrol & Pombo, 2021). Taken together, these accounts suggest that procurement should address maintenance, interfaces, terminology updates, and support. This is an implementation recommendation derived from the accounts, not a tested cost-effectiveness conclusion.

<i>Domain</i>	<i>Reported issue and source</i>	<i>Implication for implementation and evaluation</i>
Standards and semantics	Heterogeneous systems and limited structured information (Silva et al., 2017; Friedmann, 2022).	Test structural conformance and clinical meaning separately.
Governance and trust	Legal and institutional coordination across participants (Ramirez et al., 2026).	Specify responsibilities, authorization, audit, and dispute resolution.
Vendor dependencies	Development outside contracts and variable technical autonomy (Ministerio de Salud Pública y Asistencia Social, República Dominicana, 2026).	Define interface obligations and access to documentation in contracts.
Financing	Connection costs and administrative delays (Friedmann, 2022; Ministerio de Salud Pública y Asistencia Social, República Dominicana, 2026).	Budget for recurrent operation and maintenance as well as implementation.
Workforce and readiness	Training, change management, and unequal capacity (Bastias-Butler & Ulrich, 2019; Doane et al., 2026).	Match rollout and support to facility capacity.
Rural connectivity	Connectivity accounts and offline synchronization design (Capasso et al., 2024; Friedmann, 2022).	Evaluate low-connectivity workflows and report geographically disaggregated results.

Table 2: Implementation themes and practical implications.

Quantitative evidence and limits to pooling

The Brazilian eHealth-Interop study integrated 27,353 records, including 9,548 associated with patients present in multiple data sources. Its analysis compared 26 demographic attributes for each of those 9,548 records, yielding 248,248 attribute comparisons. Improved completeness was reported for 45,678 comparisons (18.40%) and improved syntactic accuracy for 2,731 (1.10%) (Miyoshi et al., 2018, Abstract, Results). These percentages are attribute-level descriptive data-quality findings. They are not patient-level interoperability success rates, clinical effects, or completed exchanges divided by attempted exchanges. Multiple attributes from the same patient must not be treated as independent patients.

The source contains numerical inconsistencies: its abstract reports 9,548 multisource records and a 1.10% accuracy improvement, whereas the Results subsection “Use Case Example in the Mental Health Care Network” initially states 9,547 records and Table 3 reports a 1.08-percentage-point accuracy difference. Table 1 and the field-analysis description use 9,548 records. The abstract figures above are reproduced as reported, not reconciled estimates; no effect size was recalculated from these inconsistent summaries.

The maternity-care assessment analyzed 1,877 facility responses after duplicate removal and conducted 27 interviews across seven of the nine surveyed countries (Capasso et al., 2024, pp. 5–6, Table 1). Information and communication technology (ICT) use included telephones, video, and messaging. This broad measure cannot substitute for validated exchange between information systems. Sampling differences and unequal country participation also limit its interpretation as a regional prevalence estimate.

The nine-country hospital analysis examines telemedicine use and its association with health-system characteristics, including information exchange (LeRouge et al., 2019). It provides contextual evidence about adoption but does not estimate the causal effect of an interoperability intervention. Differences in outcome definitions and observational confounding prevent direct combination with the Brazilian attribute results or the Dominican technical exercise.

Table 3 shows why numerical information does not automatically produce a meta-analysis. No overall success percentage, pooled effect, heterogeneity statistic, or publication-bias test was calculated. The absence of an attempted-exchange denominator in the controlled-exercise report is especially consequential: a resource count cannot be converted into an exchange success rate.

<i>Source and measure</i>	<i>Reported unit or denominator</i>	<i>Interpretation</i>
Miyoshi et al. (2018): completeness and syntactic accuracy (Abstract, Results; Results, Tables 1 and 3)	45,678 and 2,731 of 248,248 attribute comparisons	Attribute-level data-quality changes, not patient-level interoperability success rates; repeated attributes are not independent patients. Abstract accuracy: 1.10%; Table 3: 1.08 percentage points (source discrepancy).
Capasso et al. (2024): facility ICT use (pp. 5–6, Table 1)	1,877 facility responses; 27 interviews	Technology use and reported barriers; not validated exchange performance.
LeRouge et al. (2019): telemedicine adoption (pp. 215–216, Exhibits 2–3)	Hospital-level observational analysis	Association with information-system characteristics; no causal interoperability effect.
Ministerio de Salud Pública y Asistencia Social, República Dominicana (2026): participation and resources (section 3, unnumbered summary table)	16 institutions; more than 75 FHIR resources	Controlled-test activity; attempted transactions and validation denominator absent.

Table 3: Quantitative findings and what they can establish.

Rural representation and the distinction between barriers and gaps

Capasso et al. (2024) describe connectivity and equipment difficulties and challenges reaching poorly connected facilities. These observations support the presence of barriers in the participating settings. They do not establish their prevalence across all rural facilities, and recruitment difficulty may itself reduce representation of the least connected institutions.

Uruguay provides a concrete implementation response. The national case study describes an ASSE approach for rural facilities that made previously stored information available offline and synchronized new information when connectivity returned (Friedmann, 2022, p. 29). This is evidence that a rural workflow was explicitly considered. It is not a controlled estimate of rural effectiveness or proof that every rural facility experienced equivalent performance.

Rurality describes a settlement or territorial classification. Remoteness describes spatial separation from population or service centres; geographic accessibility concerns the travel time or effort required to reach services; connectivity concerns the availability and reliability of communications infrastructure. These dimensions may overlap, but none is a substitute for the others. Urban facilities can have poor connectivity, and rural facilities need not be remote.

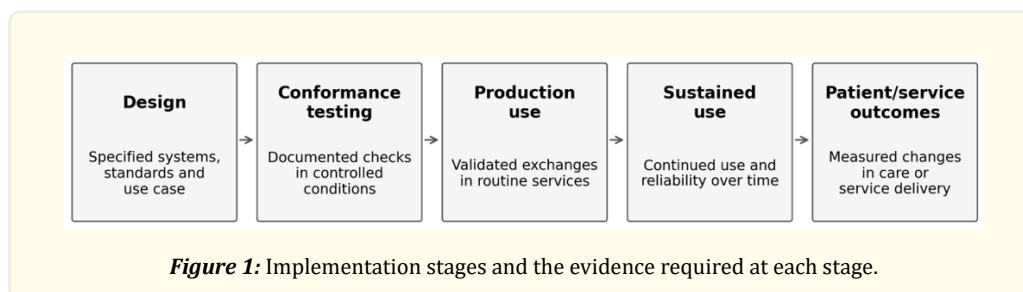
Gaudin et al. (2024, pp. 15–19) provide a methodological reference, not a health-interoperability evaluation. Their rurality index combines population size, density, built-up land, and distance to a service centre. Mexico and Panama use different service-centre population thresholds; these are not universal rural cutoffs. The framework supports explicit geographic reporting while preserving each study's original definition. It does not estimate health information exchange success or rural–urban performance differences.

The selected primary-care analysis and regional reports add context on access and infrastructure, but the reviewed corpus lacks a common rural definition and comparable rural–urban exchange outcomes (Lima-Toivanen & Pereira, 2018; Doane et al., 2026). This finding does not establish the absence of rural evidence elsewhere in Latin America and the Caribbean. Reported rural barriers, unreported rural outcomes, and documented rural adaptations are distinct findings.

Discussion

The strongest contribution of this corpus is explanatory: it helps identify the conditions through which interoperability can become operational. Its weakest contribution is estimation of comparative effects across settings. Technical standards, institutional agreements, funding, and professional workflows interact, but the documents do not identify a single component that is sufficient to produce sustained exchange.

Figure 1 distinguishes design, conformance testing, production use, sustained use, and patient or service outcomes. Evidence at one stage does not establish achievement at the next. The Dominican exercise documents testing activity; Uruguay supplies an implementation account; and the Brazilian study reports data-quality observations. Treating these as equivalent interventions would obscure their different contributions.



Note. Author-developed conceptual evaluation pathway. Arrows indicate an evaluation sequence, not demonstrated progression or causality. A controlled test does not establish routine use, sustainability, or improved outcomes. Feedback and redesign may occur at any stage.

Bibliometric and secondary sources broaden interpretation without increasing the number of independent intervention evaluations. Espina (2025, p. 1, Abstract) examines 576 documents in a global bibliometric collection; this is not a count of Latin American implementations. Lizarzaburu et al. (2026) discuss analytics in Peru. The Dominican country-program evaluation addresses adjacent social-protection interoperability (Office of Evaluation and Oversight, 2024). These sources provide context rather than independent clinical exchange effects.

Source-level inconsistencies also matter. The trust-network report and the Ceniic paper contain mismatches between some narrative country counts and lists or tables. The cross-sector digitalization report contains an unresolved citation placeholder in its health discussion. Disputed country totals and claims dependent on that placeholder were not used to generate quantitative conclusions. These issues do not invalidate every qualitative observation in the reports; they narrow the claims that can be reproduced confidently.

Priorities for implementation and evaluation

Implementation programs should begin with a defined clinical or public-health use case and an explicit exchange boundary. Evaluations should specify the sending and receiving systems, participating organizations, standards and versions, terminology services, identity-matching process, and intended use of the received information. Conformance tests should identify the checks passed rather than report only the number of participating systems.

For operational monitoring, the proposed primary measure is validated completed exchanges divided by attempted exchanges during a stated interval. Evaluators should define validation criteria, whether retries count as new attempts, and whether data are synthetic or from routine care. The core secondary outcomes are completeness, accuracy, adoption and sustained use, latency, referral completion, and costs; each requires a separate definition and analysis. A transmitted referral is not equivalent to a completed consultation, and an available interface is not equivalent to sustained use. Repeated exchanges within systems, patients, or facilities require appropriate treatment of dependence.

Rural evaluations should state the settlement classification and its source, then report remoteness, accessibility, and connectivity as separate contextual dimensions where available. They should describe eligible and participating facilities and give subgroup denominators. Where offline workflows are used, evaluators should measure connectivity interruptions, synchronization delays, and data reconciliation. These are recommendations for future evaluation, not findings established by this corpus.

A future systematic review should use reproducible searches, an explicit selection log, linked study and report identifiers, design-specific appraisal, and outcome-level extraction. Independent checking would reduce the risk introduced by single-reviewer decisions. Pooling should depend on compatible populations, implementation stages, measures, and uncertainty estimates rather than a target number of publications.

Limitations

The purposive collection may overrepresent accessible regional reports and successful or visible initiatives. No exhaustive search was performed; consequently, the review cannot establish that an unrepresented topic is absent from the broader literature. Targeted reading and a single-reviewer approach increase the possibility of selection and interpretation errors. AI assistance may also introduce errors, so its use does not replace source verification or independent review.

The documents differ in dates, purposes, settings, and methodological detail. Policy and conference materials are useful for implementation context but may reflect institutional priorities rather than measured outcomes. No formal risk-of-bias instrument or confidence assessment was applied. The thematic interpretation therefore should not be read as a ranked list of regional barriers or a high-certainty effectiveness conclusion. No patients were recruited and no new primary data were collected.

Conclusion

The reviewed sources describe health information interoperability through technical designs, implementation accounts, controlled tests, and contextual studies. They repeatedly connect implementation with governance, financing, vendor arrangements, workforce preparation, and institutional readiness. Their quantitative measures do not support a pooled estimate. Rural evidence in this corpus includes reported barriers and a documented offline synchronization approach, but does not provide a consistent basis for regional rural-urban comparison. Future evaluations should measure routine exchange explicitly and represent settings equitably. Within the reviewed corpus, missing rural subgroup outcomes should be treated as an evidence gap requiring targeted evaluation, rather than as evidence of unsuccessful rural implementation.

Declarations

Funding: No public or private funding supported this review.

Conflicts of interest: The author declares no conflicts of interest.

Ethics: This review used published literature and a publicly available institutional report. It involved no participant recruitment or access to individual-level patient data; no ethics approval was sought.

Data availability: This article reports source-level observations and no new participant dataset. The reviewed sources are identified in the references and Table 1. The Dominican executive report was supplied as public information obtained on September 1, 2026; the receipt date is not treated as its publication date. No pooled analytical dataset or statistical analysis code was generated. Search exports and a preliminary source-extraction workbook were prepared for the associated systematic-review project; neither constitutes a completed screened or appraised dataset for this article.

Registration: This critical narrative review was not registered. It does not report a completed systematic review or meta-analysis.

Author contributions: The sole author undertook conceptualization, project administration, document organization and data curation, original writing, and review and editing. The project had no independent second reviewer.

AI assistance: ChatGPT assisted document organization, source summaries, manuscript drafting and editing, bibliographic checks, and formatting. AI was not an author or an independent reviewer. The human author retains responsibility for the final manuscript and its source accuracy.

Acknowledgments: The Ministerio de Salud Pública y Asistencia Social, República Dominicana is acknowledged as the source of the public Pre-Conectatón report. This acknowledgment does not imply institutional endorsement.

References

1. Bastias-Butler E and Ulrich A. "Digital transformation of the health sector in Latin America and the Caribbean: Electronic health records". Inter-American Development Bank (2019).
2. Cabrol M and Pombo C. "How digitalization can transform health, education and work as Latin America and the Caribbean emerge from the pandemic". Inter-American Development Bank (2021).
3. Capasso A., et al. "Digital health and the promise of equity in maternity care: A mixed methods multi-country assessment on the use of information and communication technologies in healthcare facilities in Latin America and the Caribbean". PLOS ONE 19.2 (2024): e0298902.
4. Doane D., et al. "ONE Caribbean Connect. Digital Health Solutions: Conference Report 2026". Inter-American Development Bank (2026).
5. Espina EM. "Gaps in the digital transformation of public health in Latin America". Ceniic 1 (2025): e0004.
6. Friedmann D. "Uruguay's national electronic health record system". Digital Health Case Studies, Edition 02. Inter-American Development Bank (2022).
7. Gaudin Y, Padilla Pérez R and Soloaga I. "New methods to define and measure rurality in Latin America and their impact on public policies: The cases of Mexico and Panama". IFAD Research Series 93. International Fund for Agricultural Development (2024).
8. LeRouge CM., et al. "Health system approaches are needed to expand telemedicine use across nine Latin American nations". Health Affairs 38.2 (2019): 212–221.
9. Lima-Toivanen M and Pereira RM. "The contribution of eHealth in closing gaps in primary health care in selected countries of Latin America and the Caribbean". Revista Panamericana de Salud Pública 42 (2018): e188.
10. Lizarzaburu E., et al. "Leveraging data analytics to enhance public health system performance in Peru". Frontiers in Public Health 14 (2026): 1849983.
11. Ministry of Public Health and Social Assistance, Dominican Republic. "Executive Results Report: National Health Interoperability Pre-Connectathon". Executive report. (2026).
12. Miyoshi NSB., et al. "An eHealth platform for the support of a Brazilian regional network of mental health care (eHealth-Interop): Development of an interoperability platform for mental care integration". JMIR Mental Health 5.4 (2018): e10129.
13. Office of Evaluation and Oversight. "Independent country program review: Dominican Republic 2021–2024". RE-599. Inter-American Development Bank (2024).
14. Ramirez E., et al. "The Pan-American Highway for Digital Health: Enabling Trust for Health Data Exchange: An Opportunity for the Latin American and Caribbean Region". Inter-American Development Bank (2026).
15. Silva R., et al. "Interoperable electronic health records (EHRs) for Ecuador". Journal of Health & Medical Informatics 8.3 (2017): 271.
16. Valdés E and Lecaros JA. "Biobanks and data interoperability in Latin America: Engendering high-quality evidence for the global research ecosystem". Frontiers in Medicine 11 (2024): 1481891.

Appendix A Search documentation and boundaries

The following is a record of search development, not a PRISMA selection flow. The author-reported Google Scholar search date is September 26, 2026; the independently recorded PubMed execution date is September 18, 2026. Google Scholar results were not accessible for independent retrieval, and the author's previously reported count of 11 results was not reassigned to these 14 searches. No number of screened or included studies is inferred from the links.

GS01. Lower publication-year bound 2026: health care interoperability in latin america

- GS02. Lower publication-year bound 2026: health care interoperability in america
- GS03. Lower publication-year bound 2026: health care interoperability
- GS04. Lower publication-year bound 2026: healthcare interoperability Caribbean
- GS05. Lower publication-year bound 2026: why healthcare interoperability is important
- GS06. Lower publication-year bound 2026: healthcare interoperability in dominican republic
- GS07. Lower publication-year bound 2026: healthcare interoperability in spanish speaking countries
- GS08. Lower publication-year bound 2026: healthcare interoperability in rural areas
- GS09. Lower publication-year bound 2026: healthcare interoperability asia
- GS10. Lower publication-year bound 2026: healthcare interoperability arab countries
- GS11. Lower publication-year bound 2025: healthcare interoperability
- GS12. Lower publication-year bound 2022: healthcare interoperability
- GS13. Lower publication-year bound 2022: healthcare interoperability latin america
- GS14. Lower publication-year bound 2022: healthcare interoperability dominican republic

All supplied links used the English interface setting (hl=en); this does not document an English-only publication filter. The year bounds differ and do not establish a single eligibility period for this narrative review. Searches concerning Asia or Arab countries may provide background, but studies exclusively outside Latin America and the Caribbean cannot contribute regional outcome estimates. Broad searches require geographic screening. Results from overlapping searches must be deduplicated before any future selection count is reported.