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NHS Ayrshire & Arran

Health service integration

November 2026

The scope of this current awareness bulletin is the integration and centralisation of health services in the developed world.

If you require specific information, please contact us via email.

References

Alain G., et al. (2026) **'Learning Health System Implementation: Building a Hub-and-Spoke Model for Hypertension Management through the QI Hub.'** ***Journal of General Internal Medicine 41*****(13), 3602–3612.**
Background: In July 2022, the Ohio Department of Medicaid (ODM) launched a statewide Regional Quality Improvement (QI) Hub program using a hub-and-spoke model to embed Learning Health System (LHS) capabilities in primary care. The Ohio State University (OSU) Hub piloted the approach across ten affiliated sites, aiming to raise overall hypertension control by >= 10 percentage points and promote more consistent levels of hypertension control across patient populations by June 2027. This report describes the first 18 months post-implementation.
Method(s): A mixed-methods, formative evaluation followed the Exploration-Preparation-Implementation-Sustainment (EPIS) framework. The hub provided centralized data extraction (bi-weekly Epic pulls), an R Shiny dashboard, and tailored coaching on Plan-Do-Study-Act cycles (PDSA) while participating in statewide learning collaboratives. Blood pressure (BP) control rates were tracked with statistical process control (SPC) charts. Site-level logistic regressions tested interaction effects between demographics (non-Hispanic Black vs. White) and implementation period.
Result(s): Among 22,563 hypertensive adults (73,264 encounters), the baseline centerline was 72.9% controlled BP. Two SPC shifts, April 2024 to 77.3% and July 2024 to 79.1%, produced a + 6.2 percentage-point (+ 8.5%) relative improvement,

equating to ~ 4542 additional controlled BP encounters beyond baseline expectations. Site-level absolute changes ranged from -3.9% to + 14.6%. Across sites, six narrowed and four widened the Black-White BP control gap. Site-level sensitivity analysis showed no significant change in the gap. Qualitative data highlighted the importance of near real-time feedback and flexible coaching; staffing turnover constrained progress in several under-resourced clinics.
Conclusion(s): Implementing a hub-and-spoke LHS model within a large academic health system was feasible and associated with sustained gains in hypertension control over 18 months. Centralized analytics, adaptive QI support, and statewide peer learning were key enablers, whereas workforce instability remained a barrier. Early results support the model's potential to build LHS capacity in primary care, with ongoing work needed to strengthen uniform impact and long-term sustainability.
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Alhazmi, A. (2027) **'From Digital Adoption to Health-System Transformation: A Systematic Review of Outcomes, Implementation Barriers, and Conditions for Scale Across Global Health Systems.'** ***International Journal of Medical Informatics 223*****(pagination), Article Number: 106756. Date of Publication: 01 Jan 2027.**
Background: Digital adoption does not equate to health-system transformation, and evidence of sustained benefit remains insufficient, partly because empirical and review/framework evidence is rarely distinguished.
Objective(s): To synthesize evidence on outcomes, implementation barriers, and conditions for scale of digital transformation across global health systems, and derive a testable implementation-to-impact pathway.
Method(s): Reports published between 2015 and July 2026 were identified in PubMed, Scopus, IEEE Xplore, ACM Digital Library, and Google Scholar (supplementary source). Of 4420 result entries, 198 full texts were retrieved and 193 unique reports were assessed for eligibility; a second researcher verified all inclusions and a random 20% of exclusions. Reports were classified as direct empirical or review/framework evidence, appraised with the Mixed Methods Appraisal Tool and design-appropriate checklists (JBI, RAMESES, SANRA), and synthesized qualitatively using a normalized codebook; heterogeneity precluded meta-analysis.
Result(s): Forty-six reports were included (23 empirical, 23 review/framework); 33 (71.7%) were published in 2024-2026. Among the 22 primary-synthesis empirical reports, the most frequent outcomes were workforce experience (12), perceived efficiency (8), data capability (6), and access (5); population health, cost, safety, and equity evidence was largely absent. Workforce (14), infrastructure and workflow (12 each), and governance (10) led empirical barrier domains, versus governance (19), workforce (17), and infrastructure (13) in the review layer; this pattern held among 39 higher/moderate-weight reports. Evidence on scaling clustered around eight gates -

value, fit, adoption, finance, safety, equity, institutionalization, and adaptive learning - each supported by 13 to 31 reports; all eight were retained in an empirical-only sensitivity analysis.
Conclusion(s): Measurable health-system change was more often reported when governance, finance, infrastructure, interoperability, workflow, workforce participation, trust, safety, and equity were aligned around a defined public value than when technology deployment alone was scaled. These associations, drawn largely from qualitative and observational studies, inform a review-derived implementation-to-impact pathway offered for prospective testing.
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Australian Government Department of Health, Disability and Ageing. (2026) **2026-31 National Health Reform Strategy.**

Igelström, et al. (2026) **'Evaluability Assessment for the 10 Year Health Plan: Policy Brief.'**

Local Government Association. (2026) **Leading digital integration for better health and wellbeing.**

Public Policy Projects. (2026) **Why NHS transformation fails: and what leaders can do about it.**

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