

Audit and feedback in primary care: if you build it, will they come? Understanding which clinicians engage with an audit and feedback intervention

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Audit and feedback (A&F) is a well-studied implementation strategy and widely regarded as a practical engine for quality improvement in healthcare.^{1 2} By transforming clinical data into reports to provide insights into clinical performance and care processes, A&F can identify where practice deviates from evidence-based standards and provides clinicians with relevant, credible and actionable feedback.^{3 4} Over time, A&F has evolved from static reports to more interactive and user-friendly approaches that include realistic comparators and embedded action plans.^{3 5} Its effectiveness depends not only on technical design but also on psychological and organisational factors such as credibility of the feedback, leadership support and a culture of learning and improvement.^{4 6} However, the optimal design of an A&F intervention and the extent to which these factors influence its effectiveness are still unknown. Moreover, it remains unclear which clinicians will voluntarily engage with A&F and which practice characteristics influence this. In primary care, where workloads are heavy and variation is driven by both clinical complexity and social context, understanding the factors and design choices that influence engagement with A&F may determine whether A&F fits the realities of practice.

This is precisely the context for the retrospective cohort study in this issue of *BMJ Quality & Safety*. Chu *et al* look beyond the intrinsic merits of A&F to ask crucial, often overlooked questions: who voluntarily engages with it, and what does their practice environment look like?⁷ To

answer these questions, Chu and coinvestigators examined physician and patient characteristics, psychological constructs and predictors of engagement in a large provincial primary care A&F programme in Ontario, Canada.⁸ The study included 10 654 eligible primary care physicians, of which 1400 actively participated in A&F, while 9254 served as controls. Baseline characteristics were largely similar between groups. Patient characteristics (N=12.47 million) were comparable across groups, except for marginalisation indicators: A&F physicians had fewer patients in the highest quintile for racialised and newcomer populations. In addition, psychological survey results from a subset of physicians (N=126) revealed differences in attitudes towards feedback and organisational change.

Regression analyses identified key predictors of A&F engagement, while the survey subsample, although only exploratory in nature, identified a limited number of psychological features that predicted voluntary A&F uptake. Chu and coinvestigators found that voluntary engagement with A&F is associated with younger physicians, larger patient rosters, lower continuity of care and non-fee-for-service payment models such as capitation. Importantly, practices serving fewer patients in the highest quintile of racial marginalisation also engaged more. Leadership support was strongly associated with uptake, while surprisingly, large perceived performance gaps were negatively associated with uptake. The study's strength lies in its combination of practice and administrative data with measures of

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attitudes and beliefs, allowing a more complete picture than survey responses alone. Study limitations include limited clinical granularity and a low survey response rate, while engagement, defined as downloading the feedback report at least once, did not allow assessment of the degree or nature of interaction with the A&F intervention.

Equity remains the critical challenge, as the work of Chu and colleagues demonstrates. If A&F uptake remains lower in practices with ethnically marginalised patient populations, A&F risks reinforcing inequities by concentrating benefits where resources already exist.⁹ In addition, physicians who care for more ethnically marginalised patients often have a more demanding practice with additional clinical complexity and language accessibility, hindering their capacity and time to participate in quality improvement programmes. In such contexts, A&F may be perceived as an additional burden rather than a supportive tool.

More broadly, quality improvement initiatives in these settings face unique structural constraints, underscoring the need for a more explicitly equity-oriented approach.^{10 11} However, robust evidence and practical guidance on how to reduce health inequity in general practice remain limited.¹² Furthermore, equity considerations are rarely incorporated into the design, implementation or evaluation of A&F interventions. A recent secondary analysis of 271 trials found that nearly half of A&F studies did not consider equity at all, and only a small proportion explicitly embedded equity frameworks into intervention design.⁹ Taken together, these findings suggest that without intentional design choices, A&F may inadvertently reproduce or even exacerbate existing inequities.

A first step towards reducing health inequities could be improving the quality and completeness of data recorded in physicians' electronic medical records. In particular, there is a need to incorporate equity-relevant measures such as social determinants of health and to systematically use these data in the development of equity-oriented A&F interventions.¹³ Performance data are often highly aggregated, which can obscure important differences between population subgroups due to insufficient granularity.¹⁴ To address this limitation, A&F systems could stratify performance data by key sociodemographic characteristics, such as income, ethnicity, gender and geography.⁹ Such stratification would facilitate the identification of inequities and support more targeted and meaningful responses. Equity-focused A&F interventions could then move beyond overall performance improvement to explicitly address the underlying drivers of inequity and tailor feedback and improvement strategies to the needs of underserved or marginalised populations.

A second step involves embedding codesign approaches that actively engage patients and communities in the development of A&F interventions. This can help ensure that interventions are grounded in

lived experience and responsive to structural barriers to care.¹⁵ Participatory design has already demonstrated value in the development of digital A&F tools and could be further extended to incorporate explicit equity perspectives.¹⁶ Finally, system-level strategies remain essential. Strengthening primary care systems and delivering culturally responsive care are critical components of efforts to reduce health inequities.¹² Ultimately, meaningful progress will require coordinated, adaptive and community-centred approaches that address both the organisation and delivery of healthcare as well as the broader structural determinants that shape health outcomes.

Population health management (PHM) offers a complementary, system-level framework to operationalise these ambitions by shifting the focus from individual encounters to the health outcomes of defined populations.¹⁷ By integrating clinical data with information on social determinants, PHM enables providers to identify risk patterns, stratify populations and proactively target groups experiencing disadvantage. This orientation aligns closely with efforts to reduce inequities, as it explicitly prioritises those with the greatest unmet need rather than optimising average performance.¹⁸ Within this framework, A&F can serve as a key implementation mechanism: routinely generated, stratified feedback can inform clinicians and organisations about variation in care and outcomes across population subgroups. When embedded in PHM, A&F moves beyond retrospective performance monitoring to become a dynamic tool for guiding resource allocation, tailoring interventions and tracking progress towards equity goals.¹⁹ In this way, PHM and A&F together can support more anticipatory, data-driven and equity-oriented health systems.

Importantly, integrating A&F within PHM requires rethinking both the purpose and the audience of feedback. Rather than focusing solely on individual clinician performance, feedback should increasingly reflect team-based and system-level outcomes, aligned with shared population health goals. This may include indicators related to preventive care uptake, chronic disease control and equity-sensitive outcomes across different population strata. In doing so, A&F can help shift the focus from reactive care to proactive population health improvement, creating a feedback loop that continuously informs planning, implementation and evaluation.¹⁹

Ultimately, the promise that first attracted primary care to A&F remains: with fair comparisons and actionable feedback, most teams can move closer to best practice without sacrificing the spirit of individualised care. The challenge is ensuring that this promise does not remain limited to those already well-equipped. As PHM becomes the organising principle for primary care quality (emphasising proactive prevention, chronic disease stability and equity by design), A&F can serve as the measurement engine

within the system: the component that senses, signals and spurs action at the level of entire populations. To fulfil that role, A&F's impact must be strengthened. This requires, as Chu *et al* suggest, a targeted outreach to under-represented practice types, deeper investigation into why those perceiving greater need for change engage less and codesigning A&F approaches or other interventions that better support physicians caring for marginalised populations.

This insight brings us back to the central finding of Chu *et al*'s work: voluntary engagement with A&F is patterned, not universal. A reality that could guide us to design A&F as a true engine for PHM and develop novel strategies to increase the exposure of clinicians to actionable, meaningful, credible and accessible performance feedback no matter where they practice.

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