

Using routine data to evaluate local government public health interventions

To complement the PHIRST seminar on 'using routine data to inform public health interventions' (November 2024) members of PHIRST Connect and PHIRST PHRESH reflect on the role of this important resource in their evaluations.

The analysis of routine data provides important insights into how to deliver and target public health interventions. For example, routine hospital and general practitioner (GP) data has recently been used to identify potential victims of domestic violence before they come into contact with police,^[i] providing opportunities for early intervention. Analyses of routinely collected data in schools showed that pandemic closures increased inequalities by negatively affecting the physical health of students on free school meals more than other groups, informing policymakers about the full range of costs and benefits of pandemic responses^[ii].

In PHIRST Connect, the availability of routine quantitative data affects our methodological approaches, conclusions, and take-home messages about public health interventions delivered by local government. When routine quantitative data is lacking, as it was in our work on social prescribing^[iii], it is hard to quantify engagement, monitor health inequalities, or quantify the effectiveness of the programme on health outcomes. Instead, perceptions of ways to improve the service informed the main conclusions and take-home messages, such as the perceived importance of messaging, increasing staff capacity, and transport availability.

In contrast, when quantitative routine data is available, it is possible to better quantify trends and effects and to identify inequalities. PHIRST Connect has made use of this on two projects examining the impact of changes to service delivery resulting from the Covid-19 pandemic. The first examined the impact of changes on drug and alcohol service delivery and found there was greater uptake of online versus in-person services with some poorer outcomes for younger service users during the pandemic^[iv]. Programme delivery should, therefore, consider online sessions and be sensitive to age differences. The second looked at uptake and retention of an exercise referral scheme. Offering online sessions only (versus in-person and online sessions) appeared to reduce uptake. Across the board, there was a risk of the scheme increasing health inequalities because those with the highest levels of deprivation were the least likely to take up the referral or maintain engagement^[v]. In this case, programme delivery should consider making online sessions optional if they offer them and direct resources towards supporting those most at risk of not taking up the offering or dropping out.

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Researchers from PHIRST PHRESH have also previously used routine data to inform insights for public health. Qualitative analyses of open-ended survey response data from a local authority public consultation have been used to inform insights about optimising the delivery of low traffic neighbourhoods,^[vi] such as by underscoring the importance of considering the interconnecting effects of modal filters on all residential roads, including within the wider context of homes, schools and places of worship. This is an important example because qualitative insights can identify unexpected factors like these and play a role in shaping intervention delivery. Researchers from PHRESH have also used routine data from the National Child Measurement Programme (NCMP), showing that children of certain ethnicities are more likely to have a high BMI,^[vii] and are more likely to experience rapid weight gain between the ages of 4 and 11 years^[viii]. These findings provide valuable evidence to inform targeted approaches to childhood obesity prevention. In an upcoming PHIRST PHRESH evaluation, we will use routine air quality data to understand impacts of pollution across the city.



In summary, the availability of routine quantitative and qualitative data affects the methodological approaches, conclusions, and take-home messages around perceptions of service delivery, effectiveness, and inequalities. There is a need for better consideration of routine data collection, including its quality, consistency, availability, and applicability for supporting evaluation by local government and public health teams. Some areas particularly need better routine data, such as social prescribing^[ix]. In our ongoing projects, such as the PHIRST Connect project evaluating Health Checks, where routine quantitative data is available, we will be able to quantify the most effective version of the health check while also assessing inequalities and integrating service deliverer and user perspectives on service delivery.

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To register for the PHIRST seminar: Using routine data to inform public health interventions, Monday 18 November 2024, 2-3.30PM, [click here](#).



References

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- [iii] <https://phirst.nihr.ac.uk/evaluations/grappel/>
- [iv] <https://phirst.nihr.ac.uk/tag/dase/>
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- [vii] Mohamed, M., & Pallan, M. J. (2024). Tracking changes in weight status in primary school children in Birmingham: an analysis of the National Child Measurement Programme—a retrospective cohort study. *BMJ Paediatrics Open*, 8(1), e002547.
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- [ix] Howlett, N., Brown, K., Freethy, I., Mercer, S. & Özakıncı, G. (in press). We need better evidence for social prescribing: Call for Action for better systems for collaboration and building evidence. *Perspectives in Public Health*.

