hfma

How finance teams are helping to reduce health inequalities

Introduction

The Healthcare Financial Management Association (HFMA) is working on a range of outputs to help finance staff to support their organisations and systems to reduce health inequalities.

This briefing builds on previous outputs focusing on the finance role in reducing health inequalities[1], establishing the case for change[2] and the funding available[3]. This briefing goes further in summarising some known examples of good practice where the finance function is helping to reduce health inequalities and how this was achieved. There are three main ways finance staff are supporting this important agenda:

- allocating resources differently to support specific population needs
- aligning data sets and tackling variation especially focused within groups and reducing inefficiency
- investing in targeted projects focusing on specific groups, proving the financial case for longer term investment or cost reduction and improving health outcomes.

Allocating resources differently

Several integrated care boards (ICBs) have reviewed and redistributed their allocations to places more closely based on need. In doing this they have built on approaches developed by clinical commissioning groups (CCGs) and adjustments to the national allocation formula for ICBs relating to health inequalities. A national tool[4] has been developed to support this place-based allocation within ICBs, through the use of GP practice data.

ICBs are looking at the local allocation of funding because of the need to distribute resources in a way that better reflects, and addresses population need.

Leicestershire, Leicester and Rutland (LLR) CCG and its successor ICB have successfully shifted primary care resources to help reduce health inequalities.

Case study 1: Leicestershire, Leicester and Rutland (LLR) CCG and ICB

In 2020/21, Leicester, Leicestershire and Rutland (LLR) CCGs developed a new model for primary care funding to ensure better alignment with population need. This has enabled the CCGs and their successor integrated care board (ICB) to drive up health equity and reduce health inequalities.

> *'A key purpose of the ICS is to reduce health inequity. This requires us to ensure there is better alignment of the funding of services to population health need. The proposed primary care funding model is an important example of this, and it is fantastic that the extensive engagement process undertaken by the CCG team has shown that GPs are very supportive of this approach.*
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> *The funding model, using population health data, is an example of how the ICS needs to work in wider transformation of the NHS in LLR including ensuring greater investment where it is needed, for example in collaborative working across pathways, in prevention and in developing community-based services.'*
>
> *LLR chairs*

Not all organisations will have the resources available to innovate at the scale of LLR CCGs, but the approach provides insight for organisations and systems aiming to address health inequalities through a simplified payment mechanism that can be tailored as appropriate.

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[1] HFMA, *The role of the NHS finance function in addressing health inequalities*, July 2021
[2] HFMA, *Health inequalities: establishing the case for change,* May 2023
[3] HFMA, *Resources and funding to reduce health inequalities*, July 2023
[4] NHS England, *ICB place based allocation tool*, April 2022

'It is great to see an excellent example of working collaboratively to look at the needs of local populations. The way the system pulled resources together creatively to address these needs and narrow health inequalities is a great example of local initiative, collaboration and system working.'

Professor Bola Owolabi, director – healthcare inequalities, NHS England

As a place, LLR has three distinct areas ranging from the most affluent (Rutland) to the least affluent (Leicester), as illustrated by the national *Index of multiple deprivation (IMD)*[5]. The national funding regime for primary care has been in place for almost 20 years. This formula, the Carr-Hill[6] or global sums formula, is based on an estimate of a practice's patient workload and certain unavoidable costs, such as the additional costs of serving a rural or remote area and the effect of geography on staff markets and pay, and not on the actual delivery of services. The Carr-Hill formula is largely driven by age and/or gender. We know that areas of deprivation have lower life expectancy and are therefore disadvantaged through the Carr-Hill formula. The formula doesn't recognise issues such as communication or co-morbidities which are larger drivers of patient need and health outcomes. Also, the allocation of funds for locally enhanced services (LES) using weighted list size, did not account for clinical case mix. This meant that funding allocations did not recognise differences in clinical burden between practices.

To address this, LLR CCGs focused on modifying the case-mix adjustment through the application of Johns Hopkins University Adjusted Clinical Groups (ACG) System[7]. This is a population health analytics software that is flexible and responsive to new information which improves population health through resource allocation, clinical case management, predictive modelling, identifying trends and opportunities to improve them.

LLR CCGs developed a solution based on patient level data, applying a system designed to apportion resource based on measured need, adjusted for variation in data completeness, and other factors such as list turnover, communication (where English isn't first language) and deprivation. This was then used to create a new financial model to fund primary care. The financial model has a number of key components:

- case mix adjusted for population need as it affects primary care (using the ACG system)
- adjustment from distortion created by variable coding quality
- calculation of a proxy of relative need
- adjustment for list turnover and communications issues
- addition of the practice share (determined by above) to the core level of funding (core staff component plus 1.5% rurality) and share from IMD (deprivation index) to find final amount
- practices that would otherwise lose are brought up to the existing funding, in line with a no losers approach.

In the new model, some large practices were allocated only the national growth and inflation levels, reflecting the fact that their registered population was largely younger and healthier, while some smaller inner-city practices were allocated greater sums, because they have a greater proportion of patients with clinical needs, higher deprivation or communication issues who required more input from the practice team. This approach proved itself capable of focusing resource allocation more appropriately and had the confidence of the primary care teams as it was based on local data.

The main outcomes
- A £3m investment was made to give all practices a fairer level of baseline funding based on need and demographics with a commitment to the model for a three-year minimum period allowing practices to plan accordingly.
- A wider piece of work was undertaken but not linked to the funding model to harmonise services.

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[5] Ministry of Housing, Communities and Local Government, *English indices of deprivation 2019,* September 2019

[6] BMA, *Global sum allocation formula (Carr-Hill Formula),* September 2020

[7] John Hopkins medicine, *ACG system overview,* accessed August 2023

- Further investments in primary care were transparently distributed and flexed to existing and newly identified population needs.
- Each practice has a baseline of patient need, current outcome measures and a financial baseline that reflects their patients' needs.
- The creation of a simplified payment and contracting model and move to measuring outcomes.
- Teams developed a set of primary care and population health metrics that were measured and monitored over time.
- Areas of increased funding could be tailored to specific practices and support to meet the needs of their local communities, thereby enhancing patient care and experience.
- LLR CCGs collected data in one place rather than the many returns that were previously linked to obtaining funding, reducing the administrative burden.

West Yorkshire ICB has amended total allocations to places using the NHS England place-based allocation tool. The ICB compared existing allocations to the tool and phased the changes over a number of years effectively adopting a +/- 0.25% pace of change policy, requiring the whole system to agree the shift in resources across the places. Where appropriate, the updated shares were also modelled and available to programme leads to use to distribute other funds.

Case study 2: West Yorkshire ICB

Distribution of core allocations using the NHS England place-based allocations tool

West Yorkshire ICB reviewed existing core allocations to place for 2022/23 using NHS England's ICB place-based allocations tool. The tool's aim is to provide ICBs with insight into the lower area level data that informs their overall allocations, down to GP practice level. The approach, methodology and process used in West Yorkshire is summarised below into ten steps:

1. Place baselines were calculated using the national financial regime in place at the time.
2. Direct funding to trusts (for example top-up funding) was reallocated to the appropriate place to provide an amended place baseline.
3. The NHS England place-based tool was reviewed, updated and complemented by further local data and insights held by the ICB.
4. The amended place baseline from step 2, as a proportion of the total allocation was compared to the updated place-based tool figure from step 3.
5. Analysis was undertaken to explain the differences between relative need for each place and draw conclusions about what was driving the difference, for example, relative population growth as opposed to relative deprivation.
6. Engagement with a wide range of system partners from different organisations, across health, local authority, and voluntary and community sector.
7. Modelling of assorted options and scenarios for the least destabilising impact in-year.
8. Where there was a difference compared with the tool there was discussion, agreement and adjustment to places allocations by adding or subtracting up to 0.25% of the change required over a number of years to move them towards their target allocation as per the tool.
9. Sense check of the proposed place allocation against the previously published planned CCG 5-year allocations for that year (2022/23) to ensure the changes in funding reflected the changes in population and relative need.
10. Allocations (budgets) signed off through ICB system and place governance processes.

In year emerging risks were managed through the system financial risk management framework that was already established.

The only revision to the methodology for 2023/24 was to apply a plus or minus 2% de minimis limit, with any changes made in line with the pace of change policy.

Distribution of additional funding in health inequalities and unmet need adjustments

An additional £200m was allocated nationally to systems through the health inequalities and unmet needs adjustment to the allocations formula.

West Yorkshire ICB had a clear strategy, set of principles and priorities for reducing health inequalities in 2022/23. This allocation, which was baselined in 2023/24, was protected and used recurrently. The ICB adopted a layered approach and in West Yorkshire their £10.7m was split into four areas:

• 50% for the local population defined as being core20, from the national CORE20plus5 framework[8]
• 30% for 'plus at place' weighted by population size and targeted for groups affected by health inequalities, based on local intelligence
• 12% for 'plus at system' for use at scale within West Yorkshire for disadvantaged population groups such as Roma, travellers, refugees, and asylum seekers
• 8% for West Yorkshire system leadership and capability including the West Yorkshire health inequalities academy which provides examples and support for places to change services.

The result is a balance of locally driven initiatives based on local knowledge with supporting capability at scale for maximum impact across the system. The governance and impact of this funding is being monitored by the West Yorkshire improving population health programme board, made up of members from the wider system and integrated care partnership.

Tower Hamlets CCG was one of the few to buck the trend on tackling health inequalities for its population. It attributed its success in part to its approach to allocating investment resources differently by investing more in primary care. Since then, its successor body North East London (NEL) ICB has built on this approach by investing over and above the health inequalities funding and ringfencing an ambitious 1% of total allocation for investment in prevention.

Case study 3: North East London ICB

North East London (NEL) has advanced capabilities for addressing health inequalities, building on strengths developed in the NEL CCGs that merged in 2020.

Tower Hamlets has a long track record of investment in prevention to reduce inequalities in health outcomes. This is supported by a collaborative and improvement-focused culture in primary care and community services (EQUIP quality improvement programme supported by IHI). The success of Tower Hamlets was driven by early and significant investment in a data-led approach that continues within NEL. The financial strategy team (now the NEL Insights team) was created in Tower Hamlets in 2016 as a multidisciplinary (for example, economics, data science, finance) analytical function within the finance directorate. It operates as an internal consultancy with strong relationships with colleagues in commissioning, transformation, finance and business intelligence and external links to academia (for example the Queen Mary University of London Clinical Effectiveness Group). Underpinning this team is a linked data repository allowing a joined-up view across primary and secondary care records. Having capacity to work on ad hoc analytics empowers ICB and clinical colleagues to identify and target health inequalities.

City and Hackney CCG's Population Health Hub built strong links between health, local authorities, the voluntary and community sector and residents. This focused on improving capabilities around collection and use of inequalities data (particularly in mental health and sexual health), toolkits to help make health inequalities everyone's business and specific programmes (maternity, mental health, cardiovascular disease prevention, women's health) following a Marmot approach to reduce social gradients in health outcomes.

Barking and Dagenham, Havering and Redbridge (BHR) pioneered collaborative working across borough/CCG boundaries and between health and social care, with a shared focus on reducing

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[8] NHS England, *Core20PLUS5 – an approach to reducing healthcare inequalities,* 2023

unwarranted variation, reducing inequalities and improving outcomes. Their collaboration involved shared data and intelligence, including a BHR joint strategic needs assessment (JSNA), as well as a joint approach to transformation built around BHR transformation boards.

The Covid-19 pandemic raised the profile of health inequalities and demonstrated that impactful analysis can be quickly generated and acted on when we work as one system. The Insights team has always worked on health inequalities, but now includes inequalities analysis in most projects. This has generated some impactful insights for NEL, for example:

- The allocation of investment in community diagnostic centres is informed by the finding that waiting times for diagnostic imaging are around five days longer for people of Asian or black ethnicity (vs white) and for people in our most deprived areas (vs least deprived).
- The NEL local maternity system strategy is informed by an equity and equalities assessment which identifies, quantifies and provides specific detail on the biggest inequalities around maternity and neonatal outcomes and risk factors.
- The NEL population health profile provides a tool to explore population health management and inequalities issues, supplementing the view of the population provided by the local authority JSNAs with health-based data.

Finance is enabling transformation to target health inequalities like these. The £7m in 2022/23 allocated through the health inequalities and unmet need adjustment was distributed to places using the local investment schemes process and overseen by the ICS Health Inequalities Steering Group. As part of the financial strategy for 2023/24, the ICB recognised the need to continue to develop this despite the financial challenges. It agreed to allocate 1% of the ICB's overall acute and community growth to specific investment programmes, equating to an additional £23m. The process of allocation or redistribution of the £23m continues to be under review, with plans being scrutinised in light of the overall ICS financial challenges.

The ICS's ability to understand and address health inequalities will take a major step forward as they develop a cutting edge 20-year forecast model to support strategy and planning and enable more effective data-driven transformation. The model will provide NEL with:

- meaningful insights about our shared challenges
- one version of the truth
- data driven transformation cycle
- joined-up planning processes.

Collaboration on this programme within the ICS and with NHS England and academic partners is helping to form the ICS as one unit with a shared, quantified narrative about its future challenges and a shared direction. The model will allow them to understand and prioritise health inequalities, develop quantified business cases to address them and monitor transformation programmes as they happen to keep them on track. This ICB approach is influencing the design of the evolving NEL ICS Intelligence Function. Their single version of the truth supports data driven methodologies, which in turn determine the priorities for collaborative and transformational decisions across the ICB, providers, public health and the local authority.

Following work by finance staff to raise the issue of allocations adjustments for health inequalities, Blackpool was mentioned in the planning guidance as having specific needs that have been adjusted for (as part of the Lancashire and South Cumbria ICB). This is one of several ICBs that are looking at reducing the health inequalities impact of coastal deprivation through a review of the national allocation formula linking closely with the Advisory Committee on Resource Allocation (ACRA).

Aligning data sets and processes

Some organisations have focused on creating value to release resources for investment in the reduction in health inequalities, while others have seen that variation is evidence of health inequalities. Costing teams and finance business partners have a significant role in this. It is usually the case that the priorities for population health management and reducing health inequalities are the same as the priorities for reducing variation and inefficiency as people's care needs are not being met in the right place or in the best way.

Some areas have focused on aligning data sets to inform pathway transformation in specific disease groups and then used this to inform future methodology. The Welsh Health Specialised Services Committee (WHSSC) has developed a methodology for combining data sets to allow costs, inequalities and interventions across a pathway to be measured and assessed, informing planning. By comparing the 'before' and 'after' health resource usage for eight cardiac interventions it was found that certain procedures were successful in alleviating follow up pressure on health services. However, it was found that there was some unevenness in the provision of these interventions by deprivation category.

Case study 4: Welsh Specialised Commissioning (HFMA health inequalities finance action award winner 2022)

The Welsh Health Specialised Services Committee (WHSSC) works on behalf of the seven integrated health boards in Wales.

This project allowed WHSSC to analyse reasons why there is variation in whole pathways costs for Welsh patients who have had cardiac procedures. The aim was to analyse the effect of varying service provision across points of the patient pathway for eight conditions and establish whether this affected patient outcomes. Using existing primary and secondary care data sets from Swansea University sped up the information governance review approval process and enabled the analysis of the full patient pathway. As part of the project team working with data sets held within the Secure Anonymised Information Linkage (SAIL) Databank[9], public health, cardiac network and WHSSC finance staff successfully analysed the whole patient pathway. All the available data sets were linked, creating a metric that measured resource usage and access to health services for each condition. This enabled the team to ascertain whether variation in provision leads to adverse patient outcomes and demonstrated the impact of interventions in different parts of the pathway. This intelligence then allows recommendations on where investment should be focused for the best outcomes.

Primary and secondary care records were linked so that gender, age, deprivation, rurality, co-morbidities and lifestyle factors were included in the analysis. The value gained from each intervention was estimated by applying a standard cost to the events in the pathway and then comparing the 'before' and 'after' costs for each intervention. Then the direction of travel for each patient and the effectiveness of each intervention was measured. Health resource usage post treatment were compared to health resource use prior to ascertain what effect specialist interventions had on resource usage of local health services. As well as highlighting the benefits of good, proactive early intervention, variation in patient costs caused the group to do further work on finding out why costs varied for different patient groups.

The next stage analysed whether the variation in proactive or reactive provision of services for each condition affected mortality for that condition over time (GP contacts, outpatient attendances and elective bed days were deemed as pro-active; accident and emergency attendances and emergency bed days were deemed as reactive). This allowed analysis of the geographical distribution of the high-cost patients and helped to answer the question as to whether earlier intervention could affect total pathway resource usage. By comparing the 'before' and 'after' health resource usage for eight cardiac interventions it was found that certain procedures were successful in alleviating follow up pressure and costs on health services. It was found that there was some

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[9] SAIL databank, *About us - SAIL Databank*

unevenness in the provision of proactive interventions by deprivation category and that deprivation remained an important factor influencing cost.

The team is moving on to looking at service provision by geographical area within Wales. Accepting that deprivation levels contribute to higher costs the second stream of work will ascertain whether health boards are providing access to suitable services based on need within their localities as part of their integrated plans. By comparing the average amount of resources committed to each condition by locality the team will ascertain whether this is linked to condition related mortality. A particular focus will be directed towards measuring how much the active management of conditions has on overall costs and mortality.

Some ICBs have aligned data sets to inform their transformation and efficiency programmes and investment prioritisation processes, for example Nottingham and Nottinghamshire ICB.

Case study 5: Nottingham and Nottinghamshire ICB

Nottingham and Nottinghamshire ICB covers an area that faces financial challenges, with pockets of deprivation in rural farming, town centres and former mining communities. As an ICS and an ICB, population health management (PHM) is at the forefront of clinical transformation in Nottinghamshire. To this end, the ICB took an early step by bringing all analytical and support teams together into the system analytics and intelligence unit (SAIU) to lead areas such as demand and capacity modelling, utilisation, and clinical transformation, supported by population health intelligence.

The Nottingham and Nottinghamshire system supports PHM by consolidating data into a central data warehouse which serves as a secure repository. The data is then transferred to a PHM database, where it is analysed, and PHM intelligence is generated and presented via eHealthscope (front-line clinical data and patient-identifiable) and PowerBI (oversight and performance data and non-patient-identifiable). This intelligence is shared with the system's clinical design authority and clinical and care professional leaders group, who use this data to triangulate the information and agree on system priorities. These priorities are communicated to transformation delivery teams, who design interventions tailored to their local populations. This approach places clinically led intelligence at the heart of transformation. Examples of PHM information packs that have been created and used in the system include fuel poverty, COPD/respiratory health, and aging well. This process ensures that focused actions are taken to improve quality, mitigate inequalities, and reduce cost pressures.

Through the successful application of a section 251 agreement to support data sharing, the ICB can now link data within the PHM warehouse, providing more insight. This linking enables the identification of financial opportunities and baselining of activity on cost, narrowing down and focusing health and efficiency work on the groups and interventions that will have the most significant impact on health and value for money.

This approach enables the reprioritisation of resources, with ongoing work focused on developing the link between interventions and financial savings on priority areas. This innovative approach integrates health inequalities into the efficiency strategy while remaining clinically led. The resulting information informed the 2023/24 planning round and business case development process. Finance staff have been heavily involved in these discussions and processes and have linked in with their system costing group as well as supporting the development of a new business case process to support reducing health inequalities as well as delivering a rate of return.

This logical and pragmatic approach taken by Nottingham and Nottinghamshire ICB could be of great benefit to other ICBs and commissioners in a system-wide approach, given the current financial challenges.

Work to address health inequalities does not just sit with ICBs, NHS trusts also have a duty to improve health inequalities. Leeds Teaching Hospitals NHS Trust linked various population health

information and demographic data to costs to produce a number of opportunity tools to examine cohorts of people who are, or may become, patients and understand the consequences of changing interventions proactively. Other trusts could adopt a similar approach to this within their system and can get access to the tools online through the One NHS Finance innovation forum library[10].

Case study 6: Leeds Teaching Hospitals NHS Trust (HFMA health inequalities finance action award finalist 2022)

In January 2021, the costing team at the Leeds Teaching Hospitals NHS Trust created a population health management analyser, not only to cost the resources consumed by different population segments of Leeds, but also to describe patients at a fundamentally human level. Through dynamic, interactive charts it conveyed a wealth of information and lifestyle choices for different specialties. It included an opportunity calculator to highlight the potential cost and resource benefits achievable if patients attain a healthier lifestyle or improved management of their co-morbidities.

Fully utilising finance skills to combine, present and interact with large, diverse data sets, the analyser's outputs have been used to secure additional funding for various initiatives. For example, newly-funded planned care navigators, are working with the most deprived on waiting lists to support them to wait well and to navigate the healthcare system to reduce unnecessary attendances at A&E while awaiting care, reduce the amount of non-attendance at outpatient appointments and to improve their overall health so that they attend their planned care in the best shape possible.

Learning from this work and an increasing appetite to address inequalities across the organisation has led to collaborations with operational colleagues to develop an expanding suite of inequality identifying tools, including:

- a tool that provides powerful insights into waiting times, the patients waiting, the extent to which they present acutely while awaiting treatment, and calculations of costs for additional beds or theatre sessions required to treat them. It has, for example, identified that patients under particular GP practices do not have access to pain management services, and were instead attending A&E
- an A&E demographics analyser that has allowed emergency department colleagues to understand service inequalities that might exist due to age, race, sex or deprivation. For example, the correlation between age and wait times is significant
- an outpatient analyser has provided a greater understanding of the correlation between patient demographics, clinic appointment times, travel distance and their collective impact on 'did not attend' rates
- a maternity analyser, which is supporting the service to use its local data to better address the prevalence of smoking within midwifery team caseloads, helping to place two new tobacco treatment advisors. It has also been used to analyse the financial impact of surging gestational diabetic patients, using the outputs to develop a business case to fund the expansion of the antenatal diabetes team
- a cancer PHM tool created collaboratively with the trust's cancer board to explore multiple two week wait pathways, the achievement of cancer access targets, and cancer staging, and whether certain demographics present at later stages of their diagnosis.

Analyses from these tools are being combined to provide a rounded understanding of the impact that healthcare inequalities have across the patient pathway. Layered together, they sharpen focus and provide a cohesive view of inequalities, complementing the clinical information about care provided or planned.

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[10] One NHS Finance, *Finance Innovation Forum,* 2023

Investing in targeted projects

ICBs and their predecessor organisations have experience of investing in projects targeted at specific groups, but with varying degrees of success. The worsening of health inequalities during and since Covid-19 and the current financial pressures have created a different environment for investment. Developing population health management approaches and the business intelligence tools that are now available, allow resources to be better targeted. The targeting of resources should consider everything that it is available to the NHS, such as workforce, use of estate and equipment capacity, as well as funding.

A good example of targeted investment is from the Children's Health Alliance, hosted by Alder Hey Children's NHS Foundation Trust. The finance team was able to support the case for investment for the was not brought (WNB) programme. WNB is the equivalent of did not attend in adult health services. The WNB programme increased attendance through reducing the WNB rate. A better understanding of lifestyle factors enabled the reallocation of appointments and ultimately, a reduction of waiting lists for the most deprived.

Case study 7: Children's Health Alliance hosted by Alder Hey Children's Foundation Trust (HFMA health inequalities finance action award finalist 2022)

The finance team has been an integral part of supporting the was not brought (WNB) programme by bringing datasets together to link health inequalities to cost and outcomes, helping to develop the business case to invest in the programme.

The WNB artificial intelligence (AI) tool identifies risk factors which a human clinician would need to amass from multiple sources. It allows trusts, services and individuals to identify in advance which patients are likely to need support in accessing their appointment and to intervene, resulting in increased attendance, reduced WNB rate, reallocated released appointments and a reduction of waiting lists. WNB instances are much more likely to occur in high-deprivation families, and therefore this work is integral to addressing health inequalities. Two of the four WNB programmes that originated at Alder Hey have since been rolled out across nine trusts in the Children's Health Alliance (CHA) as part of an accelerator funding bid supported, hosted and tracked by the Alder Hey finance team. In summary:

- Using the AI tool to direct and guide the interventions: All of the trusts were able to use the tool to guide the interventions.
- Effectiveness of the pilots in reducing WNB rates amongst the most at-risk children: Overall, the pilots saw a 52% reduction in WNB rates amongst the most at-risk groups.
- The effectiveness of different interventions varied, but all had an impact. The programmes involving free transport performed well, although it seems that the personalised support element was more vital than the actual transport. Personalised phone calls to patients also performed well, particularly when led by admin staff with a second phone call from a clinician if an appointment was missed. Providing appointments in schools gained excellent results but was highly intensive.
- Given that the pilots could only be funded for two months, Alder Hey anticipates even greater impacts from longer-established and better-resourced interventions.
- Impact of the interventions on patient experience: the feedback was overwhelmingly positive, from patients, their families and clinicians.

The feedback from patients and clinicians regarding the impact of the WNB tool has been positive, with clinicians noting this gave them insight as to why patients may not attend, and patients and carers noting the interventions made a real difference and made them feel like they were being listened to. The WNB AI tool is now being implemented as a solution across nine of the ten CHA trusts through five pilot schemes. Providing targeted interventions and contacting this vulnerable patient cohort is reducing the WNB rates in services, improving clinic initialisation, implementing more patient-initiated follow-ups and providing a feedback loop for vulnerable families to make sure reasonable adjustments are made to reduce costs for families. Once the pilots are completed, the

WNB AI tool will be fully evaluated across the CHA, the aim being that the most successful interventions will be shared across the network and rolled out beyond pilot areas where relevant.

The impact

- Prior to the programme, the CHA trusts involved in the pilots had average WNB rates of 9.3%.
- However, within the most at risk groups (most trusts defined this as being 80% likelihood of not attending) the WNB rate was around 68%.
- During the pilots, all of the trusts saw a drop in overall WNB rates, of between 25 and 50%.
- Among the patients identified as most at risk, the WNB rate was on average 16% - suggesting a 52% drop in WNB rates for the most at risk children.
- Around 4,000 appointments were saved over a two-month period.
- In addition, a further 17% of patients cancelled their appointments in advance, freeing up a further 1,200 appointments.

The CHA invested £1.25m in the programme, with Alder Hey Innovation contributing the initial development of the AI Tool and trusts contributing resources in kind.

Quantitative data is limited by the differences between the pilots and tracking exactly what the costs were. However, if a missed appointment costs £120, we can assume that, if the pilots were scaled up to run for a year, the Birmingham transport pilot would give a benefit of £5.57 for every £1 spent, the Sheffield transport text pilot a benefit of £5.07 for every £1 spent and the Evelina phone call a benefit of £2.27 for every £1 spent. Further information is available at: www.childrenshospitalalliance.co.uk

Similarly, close working between the clinical team and finance business partners (FBPs) at Cardiff and Vale University Health Board assisted in securing permanent funding for the heart failure supportive care service (HFSCS) in 2019. This was achieved by supporting the clinical team to navigate the organisation's governance processes, by writing the business case and advocating for the development as well as analysing and evaluating the impact. The active involvement of the FBPs and the evaluation of the HFSCS has been crucial, not only to ensure its continuity, but also to facilitate scalability to allow wide-scale health inequalities in palliative care service provision to be addressed.

Case study 8: Cardiff and Vale University Health Board (HFMA health inequalities finance action award finalist 2022)

In the last 1 to 2 years of life, conditions such as heart failure, respiratory failure, kidney failure and liver failure have a similar symptom burden to metastatic cancer with equal levels of distress which palliative care input could help. However, patients dying from causes other than cancer are disadvantaged with only 20% ever receiving specialist palliative care. Many of the most socially deprived populations die from conditions other than cancer. The palliative care cancer model poorly fits the more unpredictable end-of-life journey of patients dying with chronic organ failure. Most end-of-life non-cancer patients have inappropriate, chaotic, costly hospitalisations during the last one to two years of their lives, with most subsequently dying in hospital, against their expressed preference and without experiencing the benefits of palliative care.

Senior clinicians recognised the significant gap in quality of end-of-life patient care for heart failure patients, and with the support of an industry partner initiated a pilot. The service co-produced a personalised and cost-effective model of care which better suited the needs and wishes of each patient, recognising the patient's preferred place of care and death. Working closely with the clinical team, the finance business partners (FBPs) team assisted in securing permanent funding for the heart failure supportive care service (HFSCS) in 2019. This was achieved by supporting clinical colleagues to navigate the organisation's governance processes, by writing the business case and advocating for the development as well as analysing and evaluating the impact.

The active involvement of the FBPs and the evaluation of the HFSCS has been crucial, not only to ensure its continuity, but also to facilitate scalability to allow wide-scale health inequalities in palliative care service provision to be addressed. When comparing pre and post referral periods, there was equivalent to a 44% reduction in bed days for all unscheduled admissions and a 62% reduction in bed days for heart failure related admissions. This model of care has almost tripled home-based deaths and reduced in-hospital deaths for heart failure patients by approximately 50%. 85% of patients would recommend the service to someone else in the same position as themselves.

This approach is now being rolled out to end of life renal, lung and liver disease services. By addressing inequity of access to palliative care, it is anticipated that earlier referral and co-speciality support will help improve personalised value, redress inequity and reduce unnecessary admissions.

However, not all initiatives to improve health inequalities need financial investment. According to the *Hewitt review*[11] the NHS is currently not creating the best health value that it could from the investment in the NHS.

NHS England has produced several tools to support allocative efficiency and improved outcomes more broadly, for example, the national health inequalities improvement dashboard.[12] Reviewing overall costs and tackling unwarranted variation should free up resources help support reducing operational pressures, the efficiency of pathways and focus on impactability for reducing health inequalities.

Other support tools have been developed nationally in relation to inclusive catch up on elective care. The NHS Strategy Unit is a specialist NHS team producing multidisciplinary analytical work and helping people apply the results for better evidenced decisions and outcomes as well as engaging with patients and the public. For example, the health equity and referral to treatment tool (HEARTT TM) uses clinical, social and demographic information alongside waiting times to prioritise patient treatment based on need. The tool categorises patients on the waiting list between different clinical priorities known as P codes (in descending order of priority). Within each specific P code and pathway in the tool, health inequalities data can help prioritise those who may be most affected by delays in care, or have more limited access to care. The next step with this tool is to include more information on patients' status while waiting.[13]

A good example of how this tool has been used is from University Hospitals Coventry and Warwickshire NHS Trust which reduced its elective care backlog and health inequalities[14] by segregating their waiting list by both deprivation and ethnicity and amending their approach to managing and re-ordering scheduling of waiting lists. They considered all the determinants of health, and clinical and non-clinical outcomes based on a social value judgement. Patients are still treated in order of clinical priority, but within the waiting list categories there are opportunities to look at the potential outcomes for patients rather than prioritising simply by when they were referred.

The trust is using data to pinpoint people who may suffer more from waiting, such as those who have co-morbidities or where their employment may be affected. This approach is backed up by an ethics board so as not to disadvantage any groups of patients. However, as well as looking at people on the waiting list, it is proactively seeking people who may need treatment but have not come forward. The trust is working with primary care to find these people by using information from the local strategic needs assessment to discover areas where referrals are lower than would be expected from the needs of the population.[15]

This required no new investment by commissioners, just a more targeted approach. By considering those who would attend A&E several times while waiting, urgent care costs could also be reduced, as

[11] DHSC, *The Hewitt Review: an independent review of integrated care systems*, April 2023
[12] NHS England, *The Healthcare Inequalities Improvement Dashboard*, 2021
[13] The Strategy Unit, *What matters when waiting? – involving the public in NHS waiting list prioritisation*, September 2022
[14] HSJ, *Can addressing the backlog be a means of addressing health inequalities?,* July 2022
[15] NHS Confederation, *Tackling long waiting lists and health inequalities in Coventry and Warwickshire,* 2021

more deprived groups are more likely to access these services exacerbated by delays in accessing elective care.

Key lessons learnt and messages from the case studies

This briefing shows that there is enthusiasm and good practice within the NHS finance community to support reducing health inequalities, despite numerous challenges currently facing finance staff. Many examples are replicable or adaptable locally. Key lessons learnt reflect, and are consistent with, overall change management principles.

The key messages from these case studies highlight the importance of:

• strong financial leadership on health inequalities and a whole population focus as well as development, innovation and continuous improvement
• mature, open and transparent place and system relationships, not just at director level
• absolute commitment to protecting and getting added health value from all resources and costs in the system
• health inequality priorities at system and place level signed off, owned and understood at highest level with one version of the truth
• shared and aligned data sets that link population and performance information with costs as an enabler for better decision making
• financial policies, processes, frameworks, structures and strategies that align with the direction of travel
• sufficient finance capacity, skills and priority given to health inequalities more generally
• space, time, ability and attention to developing relationships with and understanding of population health management, operational management and clinical colleagues and opportunities for better health value
• early planning to allow sufficient time for discussion and integrated approach
• using appropriate and different communications to help the financial issues and options be more easily understood as well as promoting the support that can be provided
• the importance of reflecting on, compiling and sharing and disseminating learning locally, regionally and nationally
• horizon scanning to keep pace with the health inequalities agenda, research and emerging best practice
• willingness and investment to innovate, test, evaluate and roll out best practice locally
• doing things once at scale where it makes sense to do so.

Conclusion

This work has considered the current body of best practice around the finance role in reducing health inequalities.

Many of the lessons learnt here are replicable across the United Kingdom and could have a significant impact on patient access, outcomes and experience as well as creating better value for health investment and improved health or social outcomes. This learning will help create a new culture and excellence within NHS finance that is worthy of supporting, rolling out and embedding in NHS finance and finance staff development strategies.

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About the HFMA

The Healthcare Financial Management Association (HFMA) is the professional body for finance staff in healthcare. For over 70 years, it has provided independent and objective advice to its members and the wider healthcare community. It is a charitable organisation that promotes best practice and innovation in financial management and governance across the UK health economy through its local and national networks.

The association also analyses and responds to national policy and aims to exert influence in shaping the wider healthcare agenda. It has particular interest in promoting the highest professional standards in financial management and governance and is keen to work with other organisations to promote approaches that really are 'fit for purpose' and effective.

The HFMA offers a range of qualifications in healthcare business and finance at undergraduate and postgraduate level and can provide a route to an MBA in healthcare finance. The qualifications are delivered through HFMA's Academy which was launched in 2017 and has already established strong learner and alumni networks.

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