

Aiming for equity in children with chronic conditions: introducing a new population health management system

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The widely known United Nations sustainable development goals indicate that good quality healthcare should be available to all those who need it.¹ Unfortunately, the availability of good care tends to vary inversely with the actual need for it. This is not a new issue and had already been dubbed ‘the inverse care law’ as far back as 1971.² In response, those working in healthcare strived to make changes, aiming to provide equitable access to high-quality healthcare to all patients. Despite this, differences between groups persist. Even in populations with good healthcare coverage, certain subgroups attend screening less,³ experience lower availability of care⁴ and have ongoing unmet needs.⁵ To address this, the concept of health equity was introduced, with multiple recent landmark articles stressing its importance.^{6,7} *BMJ Quality and Safety* has also embraced this concept, with equity seen as a key domain of the quality of healthcare.⁸ In this issue, the article by Cecil *et al* evaluated one potential approach to achieving more equitable care access for children.⁹

In this study, a new population health management system was introduced, serving as an additional layer of care for primary care patients, provided by specialist nurses from secondary care. Its aim was to address the inequity in access to healthcare for children with long-term health conditions in the UK.⁹ The service was called the Children and Young People’s Health Partnership (CYPHP) model of care. It was introduced in an area in the south of London, comprising 70 general practitioner (GP) practices, over three different geographical networks of practices. The programme had a three-step

approach. In the first step, all children with certain conditions (called ‘tracer conditions’) were identified via primary care health records, based on recorded diagnoses and/or use of certain medication. In this article, the results from three tracer conditions are described: asthma, eczema and constipation. In the second step, they aimed to engage the parents of these children. The three GP practice networks sent out text messages to all parents of the identified children, with an invitation to complete an online Healthcheck questionnaire. This questionnaire consisted of a general section for all children with questions on demographics and well-being, and a disease-specific section using validated questionnaires targeted at the child’s specific condition(s). The results of this Healthcheck indicated whether or not these children had unmet health needs, defined as reporting symptoms above the clinical threshold for care. In the third step, specialist paediatric nurse practitioners from the hospital provided early intervention care in the community (usually located in the GP practice).

The results showed that 129 412 children, aged <16 years, were registered with the participating practices. Overall, 15% of the total child population was identified as having at least one tracer condition (n=19 773). The prevalence was higher among black children (20%) and in the most deprived communities (17%). About 24% of the parents who had been sent a text message responded to the invitation and filled out the online Healthcheck questionnaire. The odds for engagement with the questionnaire were significantly lower for children of minority ethnic groups and from deprived



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communities. The results indicate that of those children for whom the Healthcheck questionnaire was completed, 58% had unmet health needs. In the final step, 42% of the children identified as having unmet health needs in step 2 actually received care by one of the specialist nurses. This percentage differed per condition—in asthma, only 29% of those with unmet needs had an appointment with a specialist nurse, whereas for constipation, this was 51%, and 43% for eczema. Interestingly, children from the most deprived communities were significantly more likely to have an appointment with a nurse than children from the least deprived communities. Similarly, children of black ethnicity were also significantly more likely to receive care than children of white ethnicity. Additionally, for those interested in the model, it is relevant to note that in a previously published article, more of the CYPHP model is presented.¹⁰ Besides the identification of children with these tracer conditions, it also introduced a local child health clinic and had an emphasis on general well-being and mental health. The results presented in the other article showed significant improvements in symptoms for children with eczema and asthma after 6 months, which were secondary outcomes. The primary outcomes of non-elective admissions and paediatric quality of life did not differ from a control group.¹⁰

The study does have some important limitations that need to be considered. The programme was introduced in a large number of practices, which resulted in this study having a large number of children identified with a tracer condition. However, only a small number of identified children actually filled out the questionnaire (24%). This is likely partly related to their choice of solely sending out a text message invitation, since previous studies have shown that this generally results in lower yield.¹¹ It is preferable to use multiple methods, for example, with a text message first, followed by a telephone call from the practice to the non-responders.¹¹ Another important limitation to note is the fact that a high number of respondents had unmet health needs (58%). This hints at selection bias, where those with more symptoms were more inclined to engage. The most important limitation, which directly affects the authors' aim of improving equity, was that the most deprived communities and ethnic minorities filled out the Healthcheck questionnaire significantly less often. This is in line with previous studies that have shown that these subgroups are often underserved.¹² Demonstrating cultural sensitivity, by tailoring the content of the invitation text and the online Healthcheck questionnaire to specific populations, might have improved yield.^{11 13} However, these subgroups might need a completely different approach altogether. Text messages and especially the online Healthcheck questionnaires required a high level of mastery of the English language and health literacy. Multiple studies have shown that this is an important

barrier for people from deprived communities and ethnic minorities.^{14 15} A specifically altered questionnaire based on level of mastery of the language and health literacy, with questions using simplified wording, or adding graphic examples, might have resulted in a higher participation rate.¹⁶

Overall, the new population health management system provides an exciting effort at improving equity for children with various health conditions. To identify these children, they made smart use of existing approaches, used regularly in primary care for childhood vaccinations and screening. This should be adaptable to other countries and electronic medical health records. The higher prevalence of tracer conditions in minority and deprived populations is also similar to previous research.^{17 18} Unfortunately, only a relatively small proportion participated in the online Healthcheck, with this being even lower for minority populations, which again is found in other research.¹² Most importantly though, once engaged via the Healthcheck, minority populations had a consultation with a nurse significantly more often. This is an important finding, since it shows that there is a pathway to more equitable care. It is also relevant, because unfortunately, some initiatives to improve the quality of healthcare have actually led to increased inequity.¹⁹ Future research into the long-term outcomes of this initiative will hopefully find that this approach leads to a sustained improvement in health outcomes and equity.

Another area that needs further research is the optimal way to provide additional availability of care for those in need of it. In this programme, the authors created a layer of care between the primary and hospital settings. They identified children in primary care and then used specialised hospital nurses to address their unmet health needs. This introduces an extra and temporary member to a GP practice. Future studies should assess whether this is more effective than directly training GPs and primary care nurses to provide these services. A potentially important benefit of immediately involving a person's GP is that it provides long-term continuity of care in person, which is considered the core strength of general practice. A recent study illustrates that building a relationship takes time and that mortality risk reduces significantly the longer a person was with a particular GP, as well as reductions in acute hospitalisation rates and use of out-of-hours care.²⁰

In conclusion, the study by Cecil *et al* provides a valuable way of improving equity for children with health conditions from more deprived areas and from ethnic minority populations. The most important aspect to note is that once engaged, these children significantly more often attend visits, likely resulting in more equitable care. Future research should focus on the optimal way to engage with such families in the first place.

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