# Universal eye health: are we getting closer?

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Global health estimates are primarily used for global monitoring and priority setting. The estimates for blindness and visual impairment presented in *The Lancet Global Health*[1] help to monitor the current *Universal Eye Health: A Global Action Plan 2014–2019* endorsed by the World Health Assembly in 2013,[2] which aims to reduce visual impairment and its unequal distribution.

Bourne and colleagues[1] estimated that global age-standardised blindness prevalence declined from 0·75% (80% UI 0·25–1·41) in 1990 to 0·48% (0·17–0·87) in 2015, and the corresponding decline in moderate and severe visual impairment was from 3·83% (1·66–6·42) to 2·90% (1·31–4·80). As the authors outline, reasons for this decline include socioeconomic development, targeted public health programmes, and improved access to eye health services. However, as most visual impairment occurs in older age, population growth and ageing over the period outstripped declines in prevalence. Consequently, the number of people affected increased—from an estimated 31 million to 36 million for blindness, and from 160 million to 217 million for moderate and severe visual impairment.[1]

Alarmingly, the authors predict further increases in the number of people living with blindness and visual impairment: their future projections see a reversal of the downward trend in prevalence, with blindness (0·50%; 80% UI 0·17–0·92) and moderate and severe visual impairment (3·06%; 1·31–5·15) both predicted to increase in 2020 compared with 2015 estimates.[1] The authors acknowledge the limitations of their prevalence projections, but combined with the continued growth and ageing of the population their projections suggest that eye health services must be strengthened for universal eye health to be realised.

A further barrier to achieving universal eye health is persistent inequity, confirmed by the ten-times difference in age-standardised blindness prevalence between global regions, and the excess blindness and visual impairment occurring in women compared with men in all regions, even after accounting for women's increased life expectancy.[1] Scarcity of data meant that other possible determinants of inequity such as socioeconomic status and place of residence could not be considered. Furthermore, we cannot assess whether gains at the aggregate level over the past 25 years mask increasing inequity within populations, nor whether the projected increase in impairment will disproportionately occur in disadvantaged groups. We urge researchers to expand primary data collection and reporting so that future estimates can provide a more comprehensive equity assessment, and align with the equity-oriented monitoring aims of universal health coverage[3] and the sustainable development goals.

As with many global health estimates, data gaps contribute to substantial uncertainty intervals. To calculate their estimates Bourne and colleagues[1] used data from 288 studies and more than 90 countries, but data gaps persist. For example, primary data were not available for approximately half the world's countries, less than a quarter of the 61 studies added to this updated analysis were from countries without previous data, only 15% of the surveys used national-level data, and near-visual impairment estimates were derived with data from only 14 countries.

Researchers and funders of primary surveys could reduce data gaps by prioritising future surveys in locations where known gaps exist, reporting results with standard definitions, and making survey results available, including datasets.[4] Data gaps would also be reduced if vision assessment was included in broader population-based surveys that monitor universal health coverage.[5] Fortunately, advances in mobile-based technology[6] make this inclusion feasible. We recognise the benefit of national-level data to calculate global estimates, but in settings where subnational surveys are more feasible or useful for decision makers to plan services, the ensuing larger uncertainty intervals in global estimates from subnational data are arguably a reasonable trade-off.

These new estimates benefit from the increasingly robust synthesis and modelling methods in global health metrics over the past decade. However, tension exists between calculation of global estimates and planning of services within countries, and we agree that ever-more sophisticated global estimate methods should not come at the expense of strengthening local capacity to collect, analyse, and use data.[7] In response to this concern, WHO recently committed to strengthen country health information systems within a broader

strategy to improve global estimates,[8] and we welcome the inclusion of household survey implementation and use of findings in the capacity-strengthening plans.

The GATHER statement was developed to improve reporting of global health estimates.[9] Additionally, we believe decision makers would benefit if authors prepared a so-called plain language summary of the main findings (as used by the Cochrane Collaboration). For example, Bourne and colleagues could explain the relative importance of mild visual impairment so that decision makers in countries with high prevalence of blindness can assess the extent to which they should consider mild impairment when allocating resources. To further assist interpretation of their findings, we encourage Bourne and colleagues to make their data and codes available and, in future estimates, more fully explain how they handled potentially biased studies[10] in synthesis and uncertainty calculations, as well as differences with previously published estimates.[8,9]

Are we getting closer to universal eye health? Bourne and colleagues' projected increase in blindness and visual impairment, and persistent inequities between and within countries,[1] suggest not. Better and more timely data will benefit future global estimates. More importantly, if researchers and funders strengthen country-specific capacity to collect, analyse, and use these data to implement effective and equitable eye health services, universal eye health might yet be realised.

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We declare no competing interests.



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