

## Global scourge

**Diverse measures are needed to combat the detrimental effects of poverty on children in developing and developed nations.**

Together with 232 other science journals, *Nature Immunology* is proud to have collaborated in the production of the Global Theme Issue on Poverty and Human Development. Sponsored by the Council of Science Editors, the Fogarty International Center and the National Library of Medicine and published online 22 October 2007, this collection of articles aims to heighten awareness and propel forward research on poverty and its effects on human development. Articles contributed by the Nature Publishing Group are freely accessible at <http://www.nature.com/povhumdev/html>.

In collaboration with Jeremy Farrar and Francis Gotch, *Nature Immunology* has contributed commentaries focused on efforts to combat diseases prevalent in developing countries. However, poverty is truly global in scope, and attention must also be paid to its affliction of impoverished citizens of prospering nations. Although faced with different immediate and long-term challenges, poor children living in developing and developed countries nevertheless share the prospect of a bleaker future than their wealthier compatriots. Particularly in the United States, healthcare and education deficiencies plague many of the one in six children who live in poverty.

The US healthcare crisis stems largely from the high proportion of residents, many of them poor children, whose families lack employer-provided healthcare insurance. To avoid medical costs, many uninsured residents delay treatment at doctor's offices and eventually, often after conditions have worsened, seek care at overcrowded emergency rooms. The cost of emergency care for uninsured patients is ultimately borne by hospitals, many of which are in financial crisis, and is reflected in rising insurance premiums passed on to employers and insured people.

Poor children also suffer from the disparity in the quality of education provided by high- and low-income US homes and schools. Compared with middle-class children, underprivileged children score lower on standardized reading and math tests and are less likely to graduate from high school and attend college. As many high-paying US jobs require a college degree, poor children are more likely to remain poor as adults. Thus, a cycle of poverty ensues.

With the 2008 US presidential primary race underway, candidates are debating the utility of existing measures designed to provide high-quality health care and education to poor children. The state-federal Child Health Insurance Plan (s-CHIP) provides healthcare coverage for children of uninsured families whose income is low but not low enough to fall under the federal 'poverty line' and thus qualify them for coverage by the Medicare program. However, in October, President George W. Bush vetoed a proposed expansion of s-CHIP coverage from children of working-class families with an annual income of up to \$40,000 to those in families earning up to \$62,000 per year. As \$62,000 exceeds the median US family income, some commentators cite the president's hesitancy to adopt any-

thing resembling nationalized health care as a possible reason underlying the veto. Others highlight a need to prioritize and focus on the large number of eligible children who, for various reasons, are not yet enrolled in the existing s-CHIP program. Nevertheless, political deadlock renders uncertain the fate of s-CHIP and healthcare coverage for poor US children.

The No Child Left Behind Act (NCLBA) was initiated in 2002 with the intention of closing the education 'achievement gap' between middle-class and poor children by 2014 and improving public schools by holding them accountable for student scores and progress on standardized tests. NCLBA stipulates that after 3 years of persistent low performance, schools must offer students private tutoring services and the option of transfer to other institutions; after 5 years, schools must undergo radical restructuring or be closed. So far, only modest gains in reading and math scores have been achieved, perhaps because of the relatively small numbers of eligible students exercising the tutoring and transfer options and the wide state-to-state variations in defining adequate 'progress'. In addition, where students will go in states in which a large proportion of schools are failing and should, according to NCLBA, close remains unclear.

Time will tell whether these existing programs will be renewed in intact or modified forms. However, candidates vying for 2008 presidential primary nominations offer some alternatives. Candidates have unveiled diverse plans for providing 'universal' health insurance; few rely solely on government-based coverage, whereas many seek to use employer and individual tax credits and mandates to make coverage from private insurance companies more affordable and compulsory. To improve education, candidates are offering universal pre-kindergarten, increases in teacher salaries, need-based tax credits for college costs, and grants meant to entice colleges to offer more financial aid to low-income students.

Still more can be learned from less-traditional programs, many of which have demonstrated efficacy in providing high-quality healthcare and education to underprivileged children. The state of Massachusetts successfully devised and implemented its own universal healthcare plan. Given the considerable state-to-state variations in cost of living and population demographics, insurance programs tailored to individual states might more efficiently meet residents' healthcare needs. On the education front, the test scores of underprivileged students enrolled in many of the controversial publicly financed, privately operated 'charter' schools have soared and in some places approach those of students in nearby middle-class schools.

Whether US politicians will renew and 'tweak' existing programs or adopt fresh strategies after the 2008 presidential election remains to be seen. Regardless, mainstream proposals incorporating untraditional yet certified successful principles might afford greater chances of success in the seemingly never-ending fight against poverty. 