The astounding tragedy in the Indian Ocean is not just a human disaster of unbearable magnitude. Nor is it a moment of fate. It is the consequence of years of underinvestment in the scientific and technical infrastructure needed to reduce the vulnerability of developing countries to natural and environmental calamity.

Disasters such as this one mobilize relief efforts, and the developed countries offer assistance, compassion and determination in rescue, recovery and reconstruction. But the effect of major disasters extends well beyond the immediate lives lost and buildings damaged. In the aftermath, millions of people face ongoing problems of lost households, lost livelihoods and ongoing suffering, such as the ruination of fragile community and social structures. Millions will be at increased risk from disease and starvation.

Such disasters mean that years, if not decades, of support will be needed for recovery. And the Earth doesn’t stop turning 1.5 percent per year after a disaster. The region of the Indian Ocean hit by the tsunami is affected by typhoons nearly every year. Some of its resiliency to merely large storms has been washed away.

Those of us who study disasters and their effects must wonder to what extent the scale of this tragedy would have been different if we had the technologies and scientific capabilities of the developed world been applied on the Indian Ocean and South Asia.

Disasters affect poor and developing countries disproportionately. The poor’s struggle for daily survival does not allow for disaster preparedness. Persistent environmental stress, such as recurring natural disasters, undermines investments in sustainable development. Little progress is made, particularly in sectors that make for livable societies. When this happens repeatedly, millions of the world’s countries can get trapped in a reactive rather than proactive development pattern.

What will motivate the developed world to reduce the effect of disasters before they happen?

The lesson is clear, and the next steps are obvious:

- Map the known exposures of human populations and economic activities to multiple disasters.
- Encourage proactive investment in risk-prone areas to demonstrate the practicality of available technologies.
- Build indigenous scientific and technical capacity to take advantage of existing technology and allow for local innovation.
- Link developed-world foreign aid to risk-conscious sustainable development.
- Encourage ongoing assessment of disaster risk-management and preparedness.
- Pay for it with development finance mechanisms that provide incentives for preemptive investment in vulnerability reduction.

One measure of a tragedy is how easily it could be avoided. We can begin to reduce the disaster losses we know and what we do by making relatively small investments, which seem more a matter of human rights than a matter of first-world largesse. Scientifically, and increasingly urgently, we need to couple learning about our planet and its hazards with disaster risk-management. If we know enough about natural disasters, then it is far too late to prevent an accident like the one that hit the Asian tsunami.

By Arthur Lerner-Lam, Leonardo Seebier and Robert S. Chen

Uninsured More Than 46 Million

By Stephanie Berger

Taxpayers and health care providers in New York City pay an estimated $61 million each year for healthcare services for the uninsured and publicly insured, many of them are low-wage workers and members of their families. Low-wage workers in New York City are disproportionately Hispanic, and 57 percent of these Hispanic low-wage workers lack health insurance.

The 43-page Malian School report was conducted and released through the Columbia Center for the Health of Urban Minorities, which is funded by the National Institutes of Health (NIH), the Robert Wood Johnson Center on Minority Health and Health Disparities.

Sherry Gled, chair of the Malian School’s Department of Public Health Policy, Management, and principal investigator on the study, says, “The findings indicate that low-wage workers are particular vulnerable to being uninsured. In New York City, there are nearly 1 million people who are either uninsured low-wage workers or members of families that include an uninsured low-wage worker. More than 66 percent of all uninsured full-time, full-year workers in New York City are low-wage workers.

The study, which Gled co-authored with Malian colleagues from the Malian School, found that out that low-wage workers differ from higher-wage workers in many ways. Low-wage workers are younger than other workers, are more likely to be single, and appropriate number have never married and almost half are women. The results confirm the fact that low-wage workers in New York are disproportionately drawn from minority groups and from the noncitizen population.

Results of the study also indicate that:

- Few of the coverage for low-wage workers has eroded, falling more than 1.5 percent per year in New York City since the late 1990s.
- More than two thirds of uninsured low-wage workers are employed in the retail or service industries, and retail and service occupations in other industries.
- Only 38 percent of low-wage workers report having insurance from their employers.
- Factors that increase the probability of being uninsured are those that increase the probability of being publicly insured.

“While several existing policies are being more thoroughly and carefully considered about getting coverage to low-wage workers,” says Gled, “these efforts unfortunately have not come close to solving the problems of covering this population.

FACULTY PROFILE

Simple Science Could Have Saved Thousands

Access to technology that can protect lives ought to be a right

By Arthur Lerner-Lam, Leonardo Seebier and Robert S. Chen

The medium community continues to more accurately diagnose mental retardation and anxiety disorders, a new study sheds light on how the debilitating phenomena are passed down—and may even increase—through the generations.

Nearly 40 percent of children whose parents and grandparents suffered from depression express a psychiatric disorder before they reach their early teens, according to a new study released by Columbia University Medical Center (CUMC) and the New York State Psychiatric Institute (NYSPI). This is more than double the number of children (approximately 28 percent) who develop such disorders with no family history of depression.

The study, published in the January issue of Archives of General Psychiatry, is the first to follow three generations of high-risk families and has taken more than two decades to complete. The CUMC/NYSPI research team began studying 47 first-generation family members in 1962 and then interviewed 86 of their children several times as they grew into adulthood. The team also collected data from 161 members of the third generation, whose average age is 12.

Results reveal that most of the prepregnancy grandchildren with a two-generation family history of depression develop anxiety disorders. It is highly significant that the prepregnancy grandchildren with a two-generation family history of depression develop anxiety disorders. It is highly significant that the prepregnancy grandchildren with a two-generation family history of depression develop anxiety disorders. It is highly significant that the prepregnancy grandchildren with a two-generation family history of depression develop anxiety disorders. It is highly significant that the prepregnancy grandchildren with a two-generation family history of depression develop anxiety disorders. It is highly significant that the prepregnancy grandchildren with a two-generation family history of depression develop anxiety disorders. It is highly significant that the prepregnancy grandchildren with a two-generation family history of depression develop anxiety disorders. It is highly significant that the prepregnancy grandchildren with a two-generation family history of depression develop anxiety disorders. It is highly significant that the prepregnancy grandchildren with a two-generation family history of depression develop anxiety disorders. It is highly significant that the prepregnancy grandchildren with a two-generation family history of depression develop anxiety disorders.