The costs of battling the global HIV/AIDS pandemic in coming years will be huge — and it will be more critical than ever to gain the best results possible for the dollars spent. That means adopting the most effective strategies to prevent new infections, as well as delivering care and treatment as efficiently and effectively as possible. To accomplish these goals, experts say, will require using more cost-effective drugs and taking advantage of new laboratory tools and other technologies. It will also mean various measures to shift the “emergency” response of the current decade to a more carefully planned and thought-out set of policies in the years ahead.

**Different drugs**

HIV (the virus that causes AIDS), like most microbes, adapts quickly to survive and, as a result, usually evolves to become resistant to each new generation of drugs. As more patients stay on anti-AIDS drugs longer, the virus in their bodies inevitably develops resistance, and patients must begin taking the next generation of drugs — so-called second-line drugs. These are expensive. In 2010, about 5 percent of HIV/AIDS patients worldwide will be on second-line drugs; the cost of these medications will be 20 percent of total anti-AIDS drug expenditures. But even among these second-line drugs, there are choices — and choosing the least expensive drug regimen over a more expensive one could save the world $800 million over five years.

Antiretroviral therapy for HIV/AIDS patients typically requires taking several of the drugs at one time, instead of just one. So another money-saving choice is to use so-called “fixed-dose combinations” — pills that combine several of the drugs into just one pill. These cost less to produce than single-dose regimens of several drugs, and they are also less expensive to distribute, store and dispense. For example, fixed-dose combinations of drugs for children with HIV cost about 50 percent less than giving them the individual drugs one by one, in syrup form.

**POLICY RECOMMENDATIONS**

- Donors should adopt policies encouraging AIDS-affected countries to employ best practices and cost-saving measures.
- Policies should encourage the use of the most cost-effective drug formulations, including fixed-dose combinations for adults and children.
- Programs should make the antibiotic cotrimoxazole broadly available as a preventive, to reduce and control opportunistic infections among HIV-infected people.
- Donor and country policies together should support investments in education and training of health care workers, and strategies such as e-task shifting to make the best use of available labor resources.
Heading off opportunistic infections

Because HIV destroys the immune system, untreated patients are vulnerable to a range of so-called opportunistic infections — serious pneumonias and thrush among them. The antibiotic drug cotrimoxazole, which is often used to treat these infections, can also be given to patients in advance to prevent these infections — for about a penny per pill, or an average of $7.30 per patient per year. Yet today, only 4 percent of the estimated 4 million HIV-infected children worldwide are receiving the drug. Drastically ramping up its use among infants and children, as well as pregnant women and other HIV-infected adults, could not only keep them healthier but also prolong the period of time when they can survive without using antiretroviral drugs.

Better technologies

A measurement that helps to determine whether an HIV-infected person should be on antiretroviral drugs is how much of a particular immune-system cell is present in the blood. Conducting this test requires sophisticated lab equipment that many remote areas simply lack. Portable devices are now under development that could be far more easily distributed and that would allow results of blood sample tests to be available within minutes. That would help thousands of patients who now must wait critical days, if not weeks, before learning whether they should be on antiretrovirals — for example, HIV-infected pregnant women. Testing their blood and getting them onto drugs faster would cut down on devastating mother-to-child transmission of HIV.

Moving beyond the emergency

Earlier years of this decade saw moves to quickly organize ways to get large numbers of patients on drug treatment. Now, it’s important to make delivering care and treatment as efficient as possible, in part by embedding it within stronger health care systems. Several countries have started to transfer responsibilities for treating AIDS patients from a scarce and costly resource — doctors — to somewhat less scarce and costly providers — nurses. This is called “task shifting,” and the country of Rwanda, for example, has estimated that this strategy could reduce the cost of providing AIDS services by 44 percent.

To build stronger health systems, AIDS-affected countries need far more trained health care providers. Zambia, for example, has fewer than half the human resources it needs to meet basic health needs. For an investment of $60 million, planners concluded, they could expand enrollment in local training programs in schools, colleges, and universities. Countries will need these corps of highly trained and educated workers to sustain their responses to HIV in the years ahead.