

# RAND REVIEW

Fall 2007

Vol. 31, No. 3

## Passing or Failing?

A Midterm Report Card for  
"No Child Left Behind"

—By Laura S. Hamilton, Brian M. Stecher,  
Georges Vernez, and Ron Zimmer

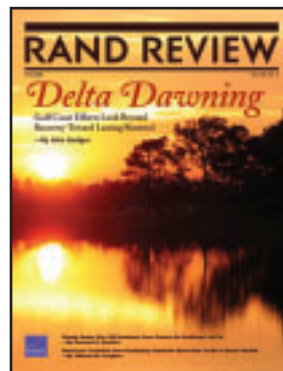
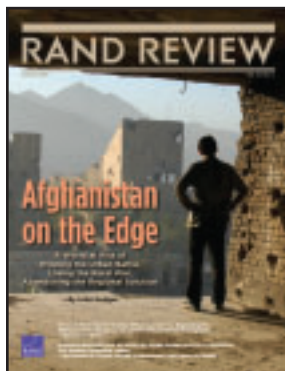
**Quick Fix: Drug Benefit Plans Driven by Short-Term Savings Could Be More Costly in the End**  
—By Geoffrey F. Joyce and Dana P. Goldman

**New World Disorder: Different Types of Ungoverned Territories Warrant Different Responses**  
—By Angel Rabasa



# Get the Big Picture

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## Message from the Editor

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### Notes from the Teachers

Some of the boldest education, health, and security policy initiatives of the past decade have only begun to produce evidence of their merits and demerits. But like midterm grades, the early marks are instructive as well as inconclusive. They can either signal initial progress or alert us of potential failures that can then be averted.

The No Child Left Behind Act of 2001 is an apt case in point. Signed in January 2002 with goals stretching clear to 2014, the landmark education legislation represents the largest insertion of federal authority into school management in U.S. history. RAND researchers Laura Hamilton, Brian Stecher, Georges Vernez, and Ron Zimmer, who have analyzed the effects of the law at nearly every level of the education system, have issued a set of mixed grades, early warnings, and general guidelines that can help the law fulfill its promise.

Health care financing for elderly Americans has undergone major changes since passage of the Medicare Prescription Drug, Improvement, and Modernization Act of 2003, which took effect on January 1, 2006. The most historic change has been the creation of dozens of alternative prescription drug benefit plans, nearly all of which are subject to a coverage gap, known as the “doughnut hole.” Although it is still too early to assess the effects of the new public benefit plans, Geoffrey Joyce and Dana Goldman have assessed the effects of a comparable private plan. They warn of potential long-term costs and propose adjustments in policy and research to help spare Medicare similar encumbrances.

Progress in one pioneering area of security policy requires that it first be recognized as a distinct policy area. As noted by Richard Solomon, president of the U.S. Institute of Peace, “The world of the 20th century was burdened with the rise of powerful, imperial-minded nation-states. The 21st, ironically, begins with the security challenge of weak and poorly governed territories.” Angel Rabasa rises to the challenge by distinguishing among three types of ungoverned territories, assigning separate policy packages for each, and suggesting how we can strike a better balance between security and development, particularly in ungoverned territories that exhibit the attributes of terrorist sanctuaries.

—John Godges

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### On the Cover

Frank Oakley, standing in front of Wyandotte High School in Kansas City, Kansas, took double doses of math and English classes as part of a program to help struggling students do better in core subjects and score higher on tests mandated by the No Child Left Behind Act.

AP IMAGES/CHARLIE RIEDEL

# Thinking Locally, Acting Locally

## 40 Years and Counting

WHILE MUCH OF RAND'S REPUTATION has been built on thinking globally across a range of international security and foreign policy issues, RAND has also been thinking and acting locally in communities across the United States for nearly 40 years. From 1968 to 1975, the New York City–RAND Institute devised solutions to nursing shortages, helped reform rent control, and showed how to relocate fire companies and reallocate police personnel; it also made recommendations about how to screen children for lead poisoning, discovered the potential of “slippery water” (the term that the New York City Fire Department gave to water with polymers added to ease friction), and helped enhance water quality in Jamaica Bay. More recently, soon after the 1992 Los Angeles riots, RAND turned its attention to examining the urban problems faced by that city.

Continuing this tradition, RAND has created the RAND Gulf States Policy Institute, a collaboration between RAND and seven U.S. Gulf States universities, to offer policy guidance to speed regional recovery and growth following Hurricanes Katrina and Rita and to tackle the significant regional needs and issues that existed before the storms struck. First established in December 2005 within four months of the hurricanes, the institute now operates out of two offices: one in Jackson, Mississippi, and the other in downtown New Orleans, Louisiana.

The institute has provided the earliest reliable projections of population return to New Orleans, detailed how the hurricanes affected Louisiana public school students, gleaned lessons for water resource management from major historical floods, and offered several guidelines that are now being implemented by the New Orleans Police Department to enhance its recruitment, training, and retention. Two of the most recent studies provide a comprehensive analysis of Mississippi's affordable housing crisis and assess wind insurance coverage post-Katrina. Expanded

efforts to help improve mental health care in New Orleans have also just recently been inaugurated.

### Rebuilding Affordable Housing

While Katrina devastated all forms of housing on the Mississippi Gulf Coast, one of the hardest hit sectors was affordable housing: that which costs no more than 30 percent of a household's monthly pre-tax income. Recovery of affordable housing units now lags behind the rest of the Gulf Coast housing market.

This lag has seriously worsened the pre-hurricane shortage of affordable housing in Mississippi's three coastal counties—Hancock, Harrison, and Jackson—as shown in the figure. Prior to Katrina, there were more than 25,000 affordable rental units. About 6,000 of them sustained severe or moderate damage, leaving only about 19,500 habitable units—a decline of 23 percent. Although Harrison County lost the greatest number of units, Hancock County suffered the most thorough devastation, losing 74 percent of its stock.

Recovery efforts for all housing types are expected to take at least three more years and cost a total of more than \$4 billion. Access to financing appears to be the single biggest obstacle to the recovery effort. Although there are many sources of financing, gaps remain. They particularly affect landlords of multifamily rental properties, along with uninsured and underinsured homeowners whose units suffered major damage.

As part of a vicious cycle, the affordable housing shortage makes it especially difficult for the coastal Mississippi counties to attract the construction laborers and other workers needed to rebuild the region's devastated infrastructure, including its housing.

“The challenge for the region is to develop a balanced growth plan that provides housing for people at every income level,” said Kevin McCarthy, a senior social scientist at RAND who is lead author of the housing study. “There needs to be more affordable housing to create diversity in the economy and build a new, better Gulf Coast.”

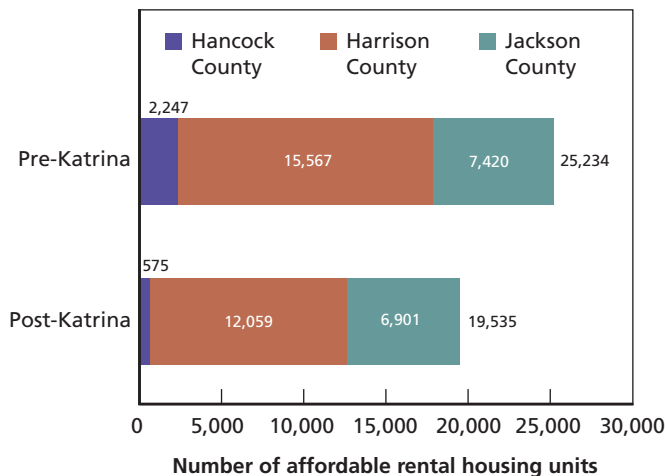
Meanwhile, stricter zoning regulations and other “smart growth” policies have raised the cost of rebuilding. If housing prices in the region continue to rise, political pressure may build to dispense with those important measures in favor of more rapid and inexpensive construction, said McCarthy. He stressed the need to ensure that pressure to speed recovery efforts in

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**“There needs to be more affordable housing to create diversity in the economy and build a new, better Gulf Coast.”**

To commemorate the 60th anniversary of the RAND Corporation, which was established as a nonprofit institution in 1948, stories about “RAND Then and Now” will appear in *RAND Review* through 2008.

## When It Comes to Affordable Housing in Mississippi, Katrina Has Made a Bad Situation Worse



SOURCE: *Post-Katrina Recovery of the Housing Market Along the Mississippi Coast*, 2007.

the short term does not disrupt longer-term mitigation efforts designed to protect the region from future storms.

## Getting Wind Insurance Since Katrina

Many businesses along the Gulf Coast have had a difficult time obtaining wind insurance since Hurricane Katrina and have often ended up paying more than twice as much for the insurance as they did previously. Gulf Coast businesses are also paying higher wind insurance deductibles while receiving lower limits on policy coverage.

Businesses have been increasingly unable to purchase coverage at all in the regulated insurance market, often resorting to state-run “residual” insurance markets that offer limited coverage to businesses unable to find insurance elsewhere.

“The plight of homeowners after Hurricane Katrina has received most of the attention,” said Lloyd Dixon, a RAND senior economist and lead author of the wind insurance study. “But business owners, especially of small businesses in the hardest-hit areas, had a difficult time finding wind insurance despite steep price increases, and some couldn’t get insurance at any price.”

As wind insurance coverage limits have declined and deductibles have increased and the use of residual markets has risen, the

risk has shifted in part from insurers to policyholders and taxpayers, including those not living in high-risk areas along the Gulf Coast. The RAND study calls for an evaluation of what government commercial wind insurance programs, if any, might be warranted given the turmoil following the 2005 hurricane season.

## Overcoming Mental Trauma

As the Gulf States region continues to recover, it will grapple with longer-standing health and social problems that can put a damper on recovery. While some housing will be rebuilt and some businesses will get back on their feet—providing services and jobs to those who return—the people who live there will continue to suffer from the trauma associated with the hurricanes.

In the two years since Hurricane Katrina and the levee failures swamped New Orleans, the prevalence of mental illness has more than doubled in the city, with one-third of residents exhibiting symptoms of mental illness. Half of those cases qualify as moderate to severe.

This concern has led to a Robert Wood Johnson Foundation-funded project awarded to RAND and REACH-NOLA (Rapid Evaluation and Action for Community Health in New Orleans, Louisiana), a community-based participatory research and action partnership working to improve community health and access to quality health care in post-Katrina New Orleans. From its New Orleans office, RAND is working as one of the REACH-NOLA partners to develop improved, culturally appropriate mental health services in the city.

“New Orleans community members have faced increased stress since the hurricanes of 2005, while also having access to fewer mental health services,” said Benjamin Springgate, project director and an adjunct scientist at RAND. “Developing additional evidence-based services to promote emotional well-being and resilience is critical to long-term community recovery.”

As it has for nearly 40 years, starting with its work in New York City, RAND will continue its history of tackling comprehensive social problems that hit close to home. ■

For more information: *Post-Katrina Recovery of the Housing Market Along the Mississippi Gulf Coast*, RAND/TR-511-OA/MAR/NAR, ISBN 978-0-8330-4293-4, 2007; and *Commercial Wind Insurance in the Gulf States: Developments Since Hurricane Katrina and Challenges Moving Forward*, RAND/OP-190-ICJ, 2007.

## Serious Gaps Exist in Health Care Quality for America’s Children

Children in the United States fail to get recommended health care more than half the time, according to a new study from the RAND Corporation, the Seattle Children’s Hospital Research Institute, and the University of Washington School of Medicine.

The study—the largest and most comprehensive examination ever of health care quality for America’s children—shows that when it comes to getting the right care at the right time, the nation’s children fare even worse than adults. Children are not receiving recommended preventive care and screening services, such as regular weight and measurement checks to ensure they are growing properly and not at risk for obesity; nor are they receiving standard care for conditions such as asthma and diarrhea.

Previous research released by RAND Health in 2003 found that U.S. adults, on average, receive only about half the recommended care for the leading causes of death and illness. That research shattered the widely held perception that health care quality is not a problem in the United States.

“Our earlier findings provided a wake-up call to improve health care quality for adults,” said senior study author Elizabeth McGlynn, associate director of RAND Health. “Up until now, most people probably assumed quality was not a problem for children. This new study tells us that’s not true. We need to get health care right for children—and we need to do it now.”

The study, which appeared in the October 11, 2007, issue of the *New England Journal of Medicine*,

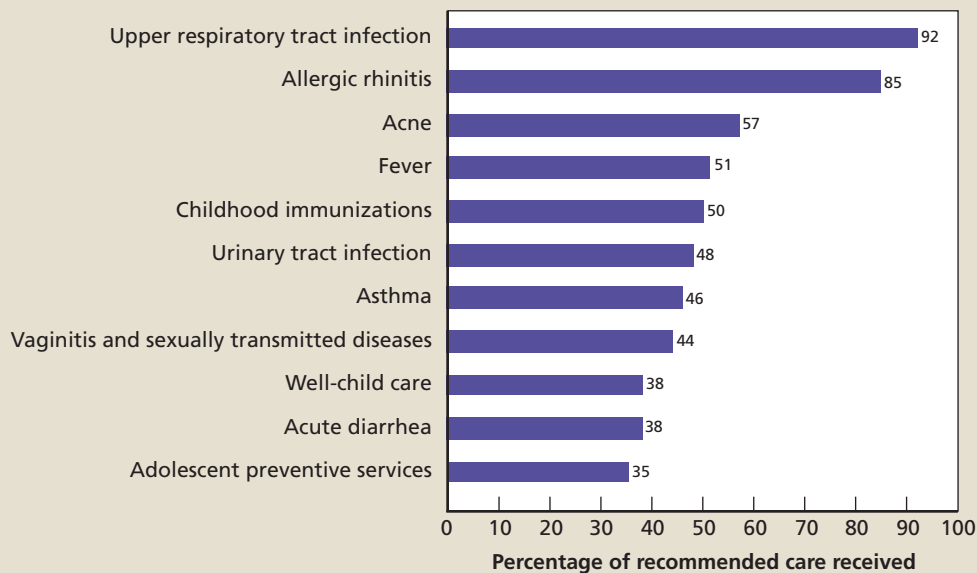
assessed 175 measures of quality covering 12 clinical areas, including preventive care. Researchers reviewed the medical records of more than 1,500 children randomly selected from 12 metropolitan areas.

Quality varied widely according to type of care: Children received 68 percent of recommended care for acute medical problems, 53 percent of recommended care for chronic medical conditions, and 41 percent of recommended preventive care. Problems were found across the continuum of care: Children received 66 percent of recommended care for treatment, but only 38 percent for screening, 47 percent for diagnosis, and 45 percent for follow-up services.

The figure illustrates some of the differences in performance by medical condition, ranging from a high of 92 percent of recommended care received by children for upper respiratory infection to a low of 35 percent of recommended care received for adolescent preventive services.

McGlynn and coauthor Rita Mangione-Smith, a researcher at Seattle Children’s Hospital Research Institute and associate professor of pediatrics at the University of Washington School of Medicine, argue that ensuring the delivery of needed care will require greater investment in health information technology systems as well as increased attention to documenting and measuring quality of care for children. As Mangione-Smith put it, “We can’t close the quality gap without first addressing the information gap.” ■

**For Children, There Are Great Differences in Performance by Medical Condition**



SOURCE: “The Quality of Ambulatory Care Delivered to Children in the United States,” *The New England Journal of Medicine*, Vol. 357, No. 15, pp. 1515–1523, October 11, 2007, Rita Mangione-Smith, Alison H. DeCristofaro, Claude M. Setodji, Joan Keesey, David J. Klein, John L. Adams, Mark A. Schuster, Elizabeth A. McGlynn.

## Army Follows One Policy on Women in Combat, but Not Another?

Although the U.S. Army is complying with the U.S. Department of Defense policy barring the assignment of women to units whose primary mission is ground combat, concerns persist about whether the army is following the letter of its own policy about assigning women, according to a RAND study.

The defense department policy excludes women from assignments to “units below the brigade level whose primary mission is to engage in direct combat on the ground.” The army has a separate policy that excludes women from assignment to units with “a routine mission to engage in direct combat, or which collocate routinely with units assigned to a direct combat mission.” Depending on the definition of “direct combat” and the meaning of “collocate,” there are concerns about whether the letter of the army’s policy is being followed.

Researchers found no shared understanding of the meaning of many additional terms used in the army and defense department policies, including “enemy” and “forward or well-forward.” The study also finds that there is no consensus among senior defense officials about the objectives of the army and defense department policies. The table shows that although the officials mostly agree on the objectives of an ideal assignment policy, there is no consensus about the objectives of the current policy.

“Neither the letter nor the spirit of the policies is clear,” said Margaret Harrell, lead author of the study. “A large part of the problem appears to be that the policies do

not anticipate the nature of combat experienced in Iraq, where there is no clearly defined battlefield.”

One issue in determining whether the army is complying with the assignment policy depends on the definition of *collocation*, which might refer to close proximity or might mean both close proximity and interdependence. The assessment finds that support units are clearly in close proximity with direct combat units in Iraq, but it is unclear whether they are also interdependent with one another. Collocation does not violate defense department policy, but the army may not be complying with its own policy, depending on the selected definition.

The assessment reveals that some aspects of the army assignment policy, such as its focus on a defined enemy on a linear battlefield and its restriction against repelling the ene-

my’s assault, are clearly inappropriate for future military operations. Meanwhile, the appropriateness of other aspects of the policy depends on the policymakers’ intent.

The study recommends that if the defense department decides to continue having an assignment policy for women, the policy should be revised to provide greater clarity and to reflect the changing nature of warfare. The study urges policymakers to consider whether a revised policy should exclude women from units and positions where they have performed successfully. The study also asks policymakers to consider how much the assignment policies in the army and other services should differ from the overall defense department policy. ■

For more information: *Assessing the Assignment Policy for Army Women*, RAND/MG-590-1-OSD, ISBN 978-0-8330-4150-0, 2007.

**Senior Defense Officials Agree on What Objectives Should Be in the Policy but Not on Whether They Are in the Current Policy**

Objective	Consensus: Objective Is Important?	Consensus: Objective Is in Current Policy?
Maximize operational effectiveness	Yes	—
Maximize flexibility of assigning women	Yes	—
Maintain current career opportunities for women	Yes	Not applicable
Open new career opportunities for women	—	Not applicable
Provide career opportunities to make women competitive with male peers	Yes	—
Protect women	No	—
Protect men	No	—
Simplify unit leadership	No	—
Exclude women from ground combat	Yes	Yes
Exclude women from occupations requiring considerable physical strength	—	—
Reflect consensus; gain buy-in	No	—

NOTES: Based on interviews with 11 senior U.S. Department of Defense and U.S. Army leaders and policymakers. “—” indicates “no consensus.”

## Liberia Sees Opportunity to Transform Its National Security Sector

Under former Liberian President Charles Taylor, the country’s security institutions met none of the criteria for a sound security sector—coherence, legitimacy, effectiveness, and affordability—according to a new RAND report. But under President Ellen Johnson Sirleaf, Liberia’s new government has made security sector transformation a high priority, and RAND has recommended steps to help the sector meet those four criteria.

The study provides an integrated analysis of the security sector institutions, forces, and services needed for the new Liberia—an overall architecture in which they can fit and a unified strategy for building them. “Such a ‘big picture’ is important to maximize the benefits from individual investments and efforts and to set priorities for the use of scarce resources,” said lead author David Gompert.

A key part of the study identifies and assesses three options for an integrated Liberian force structure (see the table). The options revolve around four variables: the size of the Liberian National Police, which addresses internal threats; the size of Armed Forces of Liberia, which addresses external threats; whether there should be a quick-reaction police unit within the Liberian National Police; and whether there should be a coast guard.

Option 1 (small Liberian National Police force, a small armed force, no quick-reaction police unit, and no coast guard) represents the status quo. “Option 1 is sound but may not be adequate to meet Liberia’s needs, especially for maintaining basic public safety, preventing armed internal opposition, and providing coastal security,” said Gompert.

Option 2 would double the size of the Liberian National Police force and the Armed Forces of Liberia and add a coast guard. This option would also nearly double the national security sector’s annual operating costs, and yet it

could still fall short of providing adequate security against armed internal opposition without relying excessively on domestic intervention by the Armed Forces of Liberia.

Incorporating the quick-reaction police unit within the Liberian National Police (Option 3) would do a better job of meeting Liberia’s security challenges, especially armed internal opposition. “Option 3 seems like a wise investment for Liberia and its supporters,” noted Gompert. “Operating costs would be only \$5 million more than Option 1, and it would cost \$43 million less to build than Option 2.”

Now is an opportune moment for Liberia to transform its national security sector, said Gompert. “The presence of the UN Mission in Liberia, the commitment of the United States, and a somewhat less hostile external security environment—albeit one that may change rapidly—provide Liberia with valuable time to create security institutions and forces that are effective against dangers, are legitimate in the eyes of Liberia’s people and neighbors, fit together and work coherently, and are well worth the cost.”

The findings in this study were informed by field visits to Liberia and by exchanges with hundreds of interested parties in Liberia and elsewhere. ■

For more information: *Making Liberia Safe: Transformation of the National Security Sector*, RAND/IG-529-OSD, ISBN 978-0-8330-4008-4, 2007.

**“A ‘big picture’ is important to maximize the benefits from individual investments.”**

Option 3 Offers Liberia Better Security at the Best Price						
Option	Potential Components of a Transformed Liberian National Security Sector				Costs (millions of U.S. dollars)	
	Liberian National Police	Armed Forces of Liberia	Quick-Reaction Police Unit	Coast Guard	Annual Operating Cost	Capital Cost
1	Small	Small	No	No	\$17.8	\$94.9
2	Large	Large	No	Yes	\$35.4	\$162.1
3	Medium	Small	Yes	Yes	\$22.5	\$118.9

NOTE: Cost estimates are based on data from *Sustainment Budget: New Armed Forces of Liberia*, a 2004 study conducted for the U.S. Department of Defense by Military Professional Resources, Inc., of Alexandria, Virginia.

## Alternative Farming Could Replace Crops with a Cleaner Cornucopia

Current methods of farming typically involve planting a *single species of annuals*—picture endless fields of wheat across the Kansas prairie. But planting *multiple species of perennials*—what is known as perennial polyculture farming—can help increase food production while reducing environmental damage and other undesirable effects of current farming methods, according to a new RAND study.

The Green Revolution, launched in 1943 in Mexico, was a particular boon to developing countries because it increased agricultural production; 64 years later, Green Revolution technologies are still going strong.

“But we’re discovering there was a price to pay in terms of, among other things, environmental degradation, erosion, soil degradation, water depletion and contamination, and a loss of biodiversity,” according to study author James Dewar, director of the RAND Frederick S. Pardee Center for Longer Range Global Policy and the Future Human Condition.

One solution he proposed is to move toward perennial polyculture farming, which, in a sense, involves “reengineering the prairie” that was originally a perennial polyculture before man began farming it. The study points out that perennial polycultures are plausible in many of the world’s land areas, including rain and temperate forests, grasslands, and chaparral (see the map).

“Successful perennial polyculture farming could address many of the environmental problems connected with existing agricultural methods,” noted Dewar. “The per-

fect ‘reengineered prairie’ would provide year-round ground cover to minimize erosion by wind and water, diminishing the need for irrigation.”

This method would also reduce soil degradation caused by the depletion of minerals and by contamination from pesticides, herbicides, and other pollutants. Contamination of freshwater systems would likewise be curtailed by reduced use of fertilizers, pesticides, and other chemicals. Protecting freshwater systems would, in turn, help prevent such environmental problems as ocean dead zones, caused in large part by agricultural runoff. Additionally, perennial polyculture farming would help reverse biodiversity loss.

Beyond environmental benefits, the study notes, perennial polyculture farming could indirectly yield social benefits by leading to reductions in hunger and poverty, improvements in health and education, and lower energy use.

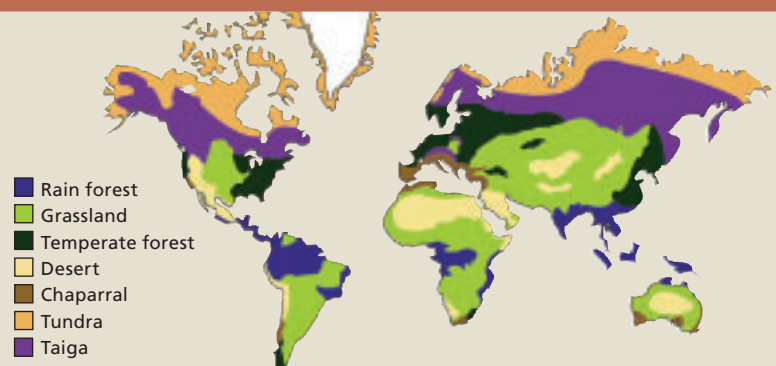
While perennial polyculture farming may appear fanciful, modern farmers already use techniques

that emulate its methods, such as rotating crops to limit the needs for pesticides and fertilizers. Recent research suggests that while perennial polyculture farming could be made to work, its economic viability is difficult to gauge. Proponents believe it would make economic sense on marginal lands with highly erodible soils, a situation that exists in many areas of the world, including much of the United States.

Technological challenges exist, “but perhaps an even greater challenge is to make sure the necessary intellectual and experimental work occurs in a world dominated by large agricultural businesses,” concluded Dewar. “An opportunity to continue research exists in developing countries, where the development community is paying increasing attention to agriculture as a key to reducing poverty.” ■

For more information: *Perennial Polyculture Farming: Seeds of Another Agricultural Revolution?* RAND/OP-179-RPC, 2007. As of press time (Web only): [www.rand.org/pubs/occasional\\_papers/OP179/](http://www.rand.org/pubs/occasional_papers/OP179/)

### Perennial Polycultures Are Plausible in Areas of Rain Forest, Temperate Forest, Grassland, and Chaparral



SOURCE: The source of this image is *Windows to the Universe*, of the University Corporation for Atmospheric Research. Copyright © 2004 University Corporation for Atmospheric Research. All rights reserved. Used with permission. As of April 13, 2007: [www.windows.ucar.edu/tour/link=/earth/images/biomes\\_map\\_big\\_jpg\\_image.html](http://www.windows.ucar.edu/tour/link=/earth/images/biomes_map_big_jpg_image.html)

# Quick Fix

## Drug Benefit Plans Driven by Short-Term Savings Could Be More Costly in the End

By Geoffrey F. Joyce and Dana P. Goldman

*Geoffrey Joyce is a RAND senior economist, codirector of the UCLA/RAND Health Services Research Training Program, and a professor at the Pardee RAND Graduate School. Dana Goldman holds the distinguished chair in health economics at RAND, directs the Bing Center on Health Economics at RAND Health, and is a professor at the Pardee RAND Graduate School.*

In many developed countries, medical practice has changed dramatically in recent decades with the increased use of prescription drugs, the availability of more and better-quality drugs to prevent and manage chronic illness, and the ability of these drugs to reduce mortality, forestall complications, and make

patients more productive. Ensuring access to prescription drugs has become a cornerstone of an efficient health care system.

At the same time, the resultant increase in drug spending has prompted pharmacy benefit managers and health plan administrators to seek either to reduce the use of prescription drugs or to steer patients toward less-expensive alternatives and distribution methods. The rapid proliferation of coinsurance plans, tiered formularies,

mandatory generic substitution, mail-order pharmacies, and other cost-saving measures has transformed the drug benefit landscape.

Given the burgeoning demand for prescription drugs and the consequent efforts to rein in their costs, we undertook a systematic review of the published literature on how the salient cost-sharing features might affect drug access, medical spending, and health outcomes. We found several reasons for concern, based on 132 studies published in English between 1985 and 2006 on the effects of drug cost sharing in Australia, Britain, Canada, Germany, Sweden, the United States, and Taiwan.

We also conducted our own study of an extreme version of cost sharing: the use of an annual limit or “cap” on prescription drug benefits. A benefit cap represents cost sharing at the extreme because patients who reach the spending cap must pay all additional pharmacy costs out of pocket. Such a cap is an integral part of the new Medicare Part D drug benefit for elderly Americans.

We found that capping drug benefits for older people causes them to quit taking their medicine at higher rates than do elderly patients with noncapped benefits. The result is consistent with the growing body of evidence that higher drug cost sharing can reduce adherence to prescriptions, leading to adverse health outcomes and higher medical costs.

### Types of Cost Sharing

In today’s drug benefit market, most beneficiaries are covered by formularies in which drugs are assigned to price tiers based on cost, the availability of close substitutes, and other factors. Generic drugs, preferred brands, and nonpreferred brands might require copayments of \$5, \$15, and \$35, respectively. In addition, plans may require beneficiaries to pay coinsurance, which is a percentage of the total cost of a dispensed prescription.

**Higher drug cost sharing can reduce adherence to prescriptions, leading to adverse health outcomes and higher medical costs.**

The purposes of tiered copayments and coinsurance are twofold: to encourage patients to use generic or low-cost brand-name medications and to prod manufacturers to offer discounts in exchange for having their brand-name products included in a preferred tier. By 2005, 74 percent of U.S. workers with employer-sponsored coverage were enrolled in drug plans with three or more copayment tiers, nearly three times the rate of 27 percent in 2000.

Some plans also impose benefit caps, which limit either the coverage amount or the number of covered prescriptions. For example, the standard Medicare Part D benefit offers beneficiaries coverage up to \$2,400 in spending in 2007, at which point coverage stops until beneficiaries reach a catastrophic limit of \$5,451 in total annual drug spending. Once the catastrophic limit is reached, coverage resumes with minimal cost sharing.

Prior to the introduction of Part D, benefit caps—with no catastrophic limit—were a standard feature of Medicare+Choice plans, now known as Medicare Advantage, and some retiree plans. As of 2002, 94 percent of Medicare+Choice plans that covered brand-name drugs had an annual dollar cap, ranging from \$750 to \$2,000.

In addition to copayments, coinsurance, and benefit caps, other cost-saving measures include prior authorization (requiring permission before certain drugs can be dispensed), step therapy (requiring the use of lower-cost medications before providing coverage for higher-cost alternatives), closed formularies (offering zero coverage for nonpreferred brands), mandatory generic substitution, and reference pricing (capping the amount a plan will pay for a prescription within a specific therapeutic class).

### Effects of Cost Sharing

Our review of 132 studies from around the world showed that for each 10 percent rise in cost sharing required of patients, either as copayment or coinsurance, their prescription drug use fell by 2–6 percent, depending on the therapeutic class and disease condition. For example, we found that doubling copayments reduced the use of cholesterol-lowering therapies and antidiabetics by 25 percent—and the use of anti-inflammatories and antihistamines by as much as 45 percent. Patients were less likely to reduce the use of these drugs if they were receiving ongoing care from a physician for the disorder. For example, doubling



*Luillia Van Lanen looks at some of her prescription medications in her Madison, Wisconsin, apartment on March 29, 2007. She was so embarrassed about not being able to afford her \$300 heart medicine that she lied to her doctor when he asked if she was taking it.*

AP IMAGES/MORRY GASH

copayments decreased the use of antidepressants by 25 percent overall, but by just 8 percent among those currently in treatment for depression.

With respect to drug benefit caps, the most salient evidence comes from an analysis of medical and pharmacy claims from a single health maintenance organization. Members whose annual drug benefits were capped at \$1,000 had 31 percent lower pharmacy costs than comparable enrollees who were not subject to a cap, but the capped enrollees also had higher rates of emergency department visits and nonelective hospitalizations.

The weight of evidence clearly demonstrates that increased cost sharing is associated with lower pharmaceutical use. These effects can be quite large, even for long-term medications, suggesting that there could also be long-term health consequences.

Indeed, the weight of evidence suggests that increased patient cost sharing can adversely affect health outcomes. The results from studies that focused on the chronically ill were unambiguous: For patients with congestive heart failure, high cholesterol, diabetes, and

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**Doubling copayments reduced the use of cholesterol-lowering therapies and antidiabetics by 25 percent—and the use of anti-inflammatories and antihistamines by as much as 45 percent.**

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**About one-quarter of Part D enrollees are expected to fall into the doughnut hole in 2007. Many seniors with high drug expenses, especially the chronically ill, will then face higher out-of-pocket costs.**

schizophrenia, higher cost sharing for prescription drugs was associated with greater use of inpatient and emergency medical services. The impact of a benefit cap, in particular, fell disproportionately on beneficiaries with moderate-to-high drug expenses, many of whom had chronic illnesses that required ongoing drug therapy.

The results from studies that looked at prescription drug cost sharing more broadly were ambiguous. Some of these studies found that higher cost sharing was associated with adverse outcomes, especially among the elderly and poor. Other studies found that when

the population was not limited to those with certain chronic illnesses, the outcomes were mostly benign.

In general, though, increased cost sharing for prescription drugs is associated with lower rates of drug treatment, worse adherence to prescriptions among patients, and more frequent discontinuation

of therapy. For some chronic conditions—including congestive heart failure, high cholesterol, diabetes, and schizophrenia—increased cost sharing is also associated with an increased use of health care services *other than* prescription drugs, offsetting any potential cost savings from the reduced use of the drugs themselves.

The adverse effects of medication cost-containment policies may be magnified among low-income groups, whose high rates of chronic health problems, combined with low incomes, may result in more price-sensitive behavior. Low-income people with moderate-to-high drug expenses will likely pay a higher fraction of their incomes on medications and face longer gaps in coverage than will wealthier people.

Most evidence on this point comes from studies of Medicare and Medicaid, the joint federal and state health insurance plan for poor and disabled Americans. Medicaid enrollees in South Carolina used significantly fewer drugs after the imposition of just a 50-cent copayment. Elderly Medicaid recipients in states with copayments consumed fewer drugs and were less likely to fill any prescriptions during the year than were those in states without copayments. Among Medicare beneficiaries in Pennsylvania, those with annual incomes of more than \$18,000 were 18 percent more likely to treat medical problems with prescription drugs than were those with incomes of less than \$6,000.

### **Beware the “Doughnut Hole”**

In our own study of benefit caps, we compared the behavior of U.S. retirees in capped and noncapped drug plans offered by a large private employer. The capped plan was comparable to the Part D drug benefit that Medicare now offers to all elderly Americans with one exception: Part D coverage resumes after a certain level of spending within the calendar year.

The Part D coverage gap, which in 2007 falls between \$2,400 and \$5,451, is known as the “doughnut hole.” Under the standard benefit, beneficiaries must pay first a \$265 annual deductible and then 25-percent coinsurance on annual drug costs up to \$2,400. Beyond \$2,400, the coverage stops completely until beneficiaries hit \$5,450 in total drug spending—or total out-of-pocket expenses of about \$3,850 for the year. At \$5,451, coverage resumes with minimal patient cost sharing.

About one-quarter of Part D enrollees are expected to fall into the doughnut hole in 2007. Many seniors with high drug expenses, especially the chronically ill, will then face higher out-of-pocket costs. Although it

*James Antonoff, 80, poses with his Medicare paperwork at home in Alpharetta, Georgia. Antonoff, who requires 13 prescriptions for a litany of ailments including glaucoma and gout, experienced difficulty selecting an affordable Medicare drug plan. He and his wife spent 40 hours comparing alternatives.*



API IMAGES/GREGORY SMITH

is still too early to assess the effects of Part D, which just began in 2006, it is possible to gain insight into the likely effects by examining how retirees have fared under private insurance plans with similar benefit caps.

In our study of data from a large private employer, the annual prescription drug benefit for some retirees was capped at \$2,500 in plan spending, after which the members had no drug coverage until benefits resumed in the next calendar year. The benefit for other retirees was not capped. Enrollees in both plans paid 35-percent coinsurance for both generic drugs and preferred brands and 60-percent coinsurance for nonpreferred brands, subject to identical out-of-pocket maximums per prescription.

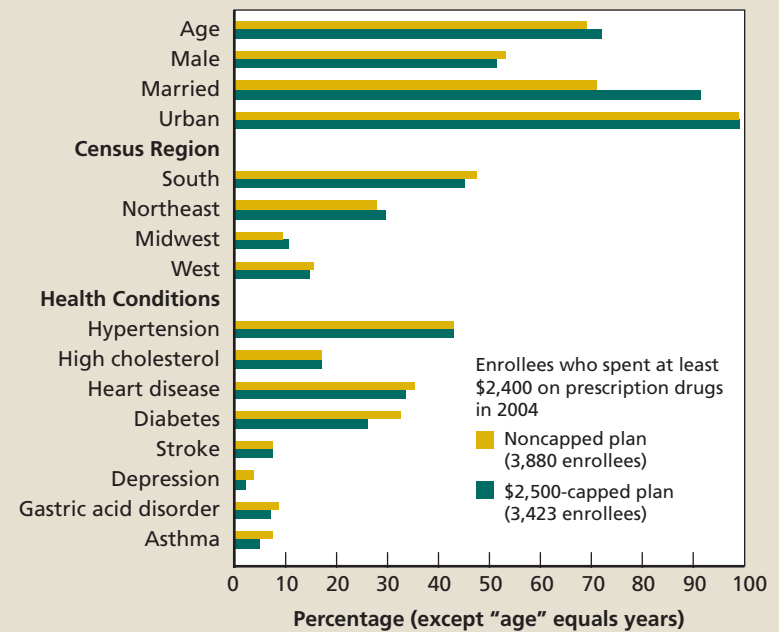
We focused on enrollees whose annual prescription drug spending was at least \$2,400 and who were thus most likely to be affected by a \$2,500 cap. Such high-cost enrollees numbered about 7,200 in total, with those in the capped plan differing only modestly from those in the noncapped plan across several demographic and health measures (see Figure 1).

One of our most alarming discoveries was the roller-coaster nature of drug consumption among those in the capped plan relative to those in the noncapped plan over the course of nearly three years. By December of each year, the use of antidepressant, antidiabetic, antihypertensive, and cholesterol-lowering agents was 15–28 percent lower among members in capped versus noncapped plans (see Figure 2). The relative reductions in use were even larger for two drug classes with broadly available over-the-counter substitutes: The use of anti-inflammatories and antiulcerants were 30 to 50 percent lower among members in capped versus noncapped plans by the end of each year.

However, these differences narrowed greatly once coverage resumed in the next year. For example, by March 2004, drug utilization differed by less than 10 percent for five of the six therapeutic classes. Put another way, the trends by therapeutic class clearly indicate relatively severe drops in use at the end of the year for those in the capped plan, followed by large upswings when coverage resumed.

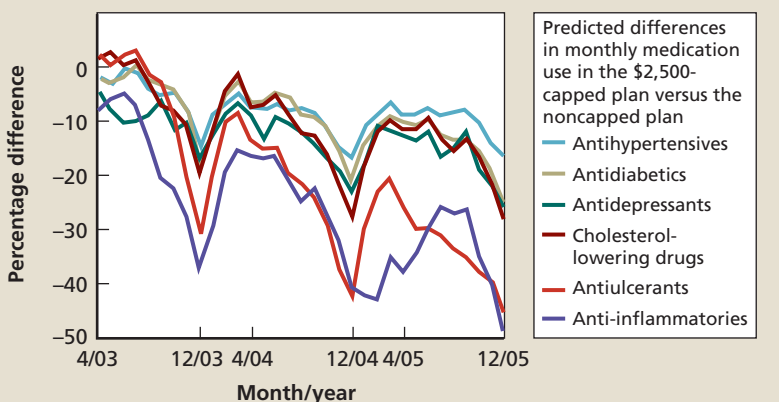
We measured the annual rates of discontinuation and reinitiation of prescription drugs across seven therapeutic classes: antidepressants, antidiabetics, antihypertensives, anti-inflammatories, antiulcerants, cardiac drugs, and cholesterol-lowering drugs. We found that those in the capped plan who spent \$2,400 or more on medications in a given year discontinued them

**Figure 1—People Who Were Subject to Drug Benefit Caps Differed Only Modestly from Those Who Were Not**



SOURCE: "Pharmacy Benefit Caps and the Chronically Ill," 2007.

**Figure 2—Medication Consumption Fell the Most Each December Among Enrollees in the Capped Plan Versus the Noncapped Plan and Rose at the Start of Each New Year Once Coverage Resumed**



SOURCE: "Pharmacy Benefit Caps and the Chronically Ill," 2007.

**One of our most alarming discoveries was the roller-coaster nature of drug consumption among those in the capped plan relative to those in the noncapped plan over the course of nearly three years.**

**The policy challenge for Medicare today is to motivate prescription drug users to spend prudently without leading them to forgo needed and cost-effective medication.**

at consistently higher rates across all drug classes than did those in the noncapped plan (see Figure 3). The drug classes with the greatest differences in discontinuation rates were antihypertensives (22 percent under the capped plan versus 14 percent in the noncapped plan) and cardiac drugs (28 versus 19 percent).

Patients discontinue therapy for many reasons. But if the cap is playing a role, we would expect to see higher rates of resumption in the capped plan once the year ends and benefits resume. In fact, we do observe such a pattern, as also shown in Figure 3. Enrollees in the capped plan reinitiated drug use at higher rates when benefits resumed the next year, suggesting that decisions to discontinue had been strongly influenced by the benefit cap.

These results suggest that capping benefits is disruptive to drug therapy for many chronically ill patients. At the same time, high-cost enrollees who reach the cap also switched to other plans at disproportionately higher rates, suggesting that a benefit cap’s long-term ability to contain costs is limited by the fact that some users who hit the ceiling will migrate to less-restrictive plans.

Unlike the private benefit plan we studied, of course, Medicare’s Part D drug benefit resumes when spending reaches \$5,451 within a calendar year. Whether this additional benefit, which might affect 10 to 15 percent of the enrolled population, will result in different beneficiary responses remains unclear.

The policy challenge for Medicare today is to motivate prescription drug users to spend prudently without leading them to forgo needed and cost-effective medication. One promising trend is that several private plans have begun covering most generic drugs within the Medicare coverage gap at little additional cost.

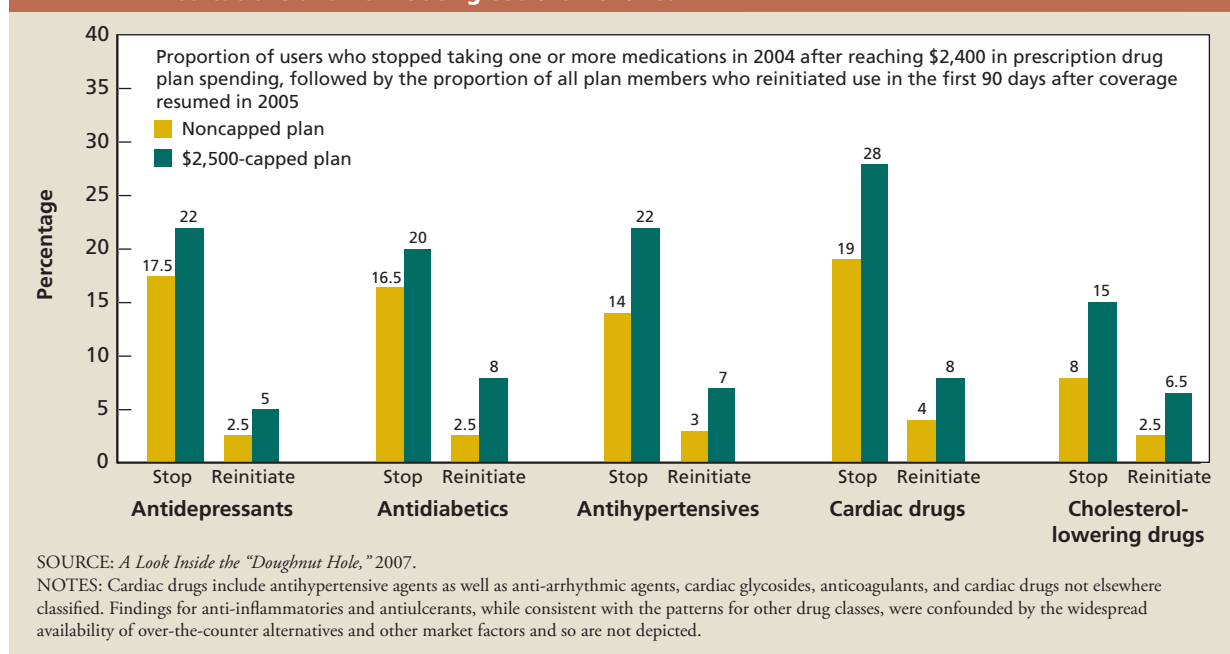
The question now is whether Part D itself can be redesigned to offer continuous coverage at the same overall cost. As one idea, requiring the elderly to make higher copayments that remain constant throughout the year—in exchange for uninterrupted coverage—might result in better long-term clinical outcomes.

**Prescription Regimen**

Many questions remain regarding drug cost sharing in general and drug benefit caps in particular. The remainder of this essay prescribes a course of future inquiry. Five key research issues remain unresolved.

First, while greater cost sharing is certainly associated with reduced access to drugs, the precise mechanisms are obscure. Reduced access could be triggered by reduced *initiation* of drug treatment, worse *adher-*

**Figure 3—Drug Benefit Caps Were Associated with Higher Rates of People Both Stopping Their Use of Medications and Reinitiating Use the Next Year**



ence among existing users, or more frequent *discontinuation* of therapy. Distinguishing among these three is important to help physicians and benefit plan managers provide proper monitoring and advice to counteract any adverse consequences. We found evidence that all three triggers may be complicit when cost sharing rises; however, worse adherence seems to be the primary culprit.

Second, the time horizon over which higher cost sharing is associated with adverse medical events—such as hospitalizations and worsening clinical outcomes among patients with congestive heart failure, high cholesterol, diabetes, and schizophrenia—is longer than one to two years. There might be adverse consequences for asthmatics as well. Because patients leave employers and plans frequently, and because benefits change rapidly, it is difficult to isolate any long-term consequences using only short-term studies.

Third, there is little reliable evidence to support our supposition that the worst effects of cost-containment policies are likely to be suffered among low-income groups, whose high rates of chronic health problems and low incomes could diminish their adherence to prescriptions. One of the severe limitations of claims data is that they do not include information on race, ethnicity, income, education, and wealth. Whenever economic status is included, as derived from national survey data, there is substantial bias in its measurement.

Fourth, the introduction of Medicare Part D has initiated a bold experiment with benefit caps. The dynamics of discontinuation and reinitiation of therapy from year to year under Part D, as well as the effects of the catastrophic limit, have yet to be assessed. Understanding how patients respond to a benefit cap is also important because it serves as a counterpoint to consumer-directed health plans with high-deductible catastrophic coverage. In these latter plans, patients must pay all the costs until a cap is reached, beyond which they pay nothing. Benefit caps, in contrast, provide coverage up to a specified limit. A comparison of these financing alternatives is needed, especially with regard to how they might affect those with chronic illnesses.

Fifth, there has been a marked increase in the use of costly specialty drugs, which are often used to treat complex chronic conditions, such as anemia, cancer, growth hormone deficiency, and multiple sclerosis. Spending on specialty drugs is expected to soar in the near future as new drugs enter the market for the

treatment of diabetes, osteoporosis, and rheumatoid arthritis—diseases that affect much larger populations. Many insurers are contemplating a variety of cost-sharing strategies to control the use and cost of these drugs. This area may be the next frontier of dramatic changes in drug benefit design. It will be important to assess the consequences for spending and health.

To date, the evidence suggests that more cost sharing is associated with more hospitalizations and emergency department visits, particularly among the chronically ill. In some cases, cost sharing can steer patients to more cost-effective treatments without harming health. But for drugs that are known to be cost-effective in preventing expensive medical care, greater cost sharing appears to be cost-ineffective in the long run.

The challenge for public and private prescription drug plans is to make patients more sensitive to the cost of drug treatment without inducing them to forgo cost-effective care. This requires knowing how patients respond to different incentives and evaluating the net benefits of alternative drug therapies, not only for the immediate effects of the drugs but also for future health care costs, patient productivity, and patient utility. ■

## Related Reading

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“Pharmacy Benefit Caps and the Chronically Ill,” *Health Affairs*, Vol. 26, No. 5, September/October 2007, pp. 1333–1344, Geoffrey F. Joyce, Dana P. Goldman, Pinar Karaca-Mandic, Yuhui Zheng.

“Pharmacy Benefits and the Use of Drugs by the Chronically Ill,” *Journal of the American Medical Association*, Vol. 291, No. 19, May 19, 2004, pp. 2344–2350, Dana P. Goldman, Geoffrey F. Joyce, José J. Escarce, Jennifer E. Pace, Matthew D. Solomon, Marianne Laouri, Pamela B. Landsman, Steven M. Teutsch.

“Prescription Drug Cost Sharing: Associations with Medication and Medical Utilization and Spending and Health,” *Journal of the American Medical Association*, Vol. 298, No. 1, July 4, 2007, pp. 61–69, Dana P. Goldman, Geoffrey F. Joyce, Yuhui Zheng.

“Varying Pharmacy Benefits with Clinical Status: The Case of Cholesterol-Lowering Therapy,” *The American Journal of Managed Care*, Vol. 12, No. 1, January 2006, pp. 21–28, Dana P. Goldman, Geoffrey F. Joyce, Pinar Karaca-Mandic.



# Passing or Failing?

## A Midterm Report Card for “No Child Left Behind”

By **Laura S. Hamilton, Brian M. Stecher, Georges Vernez, and Ron Zimmer**

*The authors—who have expertise in behavioral science, social science, urban planning, and economics, respectively—are all education policy analysts at RAND.*

**A**lthough the No Child Left Behind Act of 2001 has been automatically extended for one year in the absence of a five-year reauthorization by the U.S. Congress, the debate over reauthorization continues. At any time until the current extension expires on September 30, 2008, Congress can reauthorize the law, which constitutes America’s largest-ever federal intervention into the management of primary and secondary schools.

RAND and its research partners have completed three in a series of ten reports on the effects of the landmark legislation. An additional RAND analysis has examined how the federal legislation has affected education at the local level. Based on the evidence so far, reflecting data as of 2005, we at RAND give the legislation a set of decidedly mixed midterm grades.

Nationally, all 50 states have complied with the law by testing students in required grades in reading and math. Of utmost concern, though, student “proficiency” on these tests has little common meaning across states. Thus, the criteria for determining which schools are identified for improvement—or ultimately for severe sanctions—also vary greatly across the states.

We studied the effects of two educational options that are provided by the legislation to parents whose children attend

schools that are identified as needing improvement. One option is for parents to transfer their children to a school that is not identified as needing improvement; the other is for parents to enroll their children in tutoring or other supplemental educational services. We found that the few students who transferred from schools identified for improvement to higher-scoring schools saw no statistically significant effect on achievement. However, students from low-scoring schools who enrolled in tutoring or other supplemental services usually did score somewhat higher on reading and math tests.

We assessed the law’s provision that all teachers be “highly qualified.” Most teachers do meet their state requirements for being highly qualified. Once again, however, the requirements vary widely from state to state. We also found that the percentage of teachers deemed not highly qualified is higher among those who teach students with the greatest needs: special education students, English-language learners, and students in high-poverty and high-minority schools. These issues need to be addressed.

At the local level, we found that the law has affected the work of superintendents, principals, and teachers both positively and negatively. The law has led to a laudable emphasis on student achievement. But many teachers warn that “achievement” has been defined largely by *testing* rather than *learning*; they report narrowing the curriculum to focus on tested topics and even certain styles of test questions or formats. Despite this emphasis on testing, most local educators doubt their ability to meet the escalating student achievement (test-score) targets demanded by the law over the next several years.

Teachers also cite as unfair the fact that “adequate yearly progress” in test scores is now defined in terms of grade-level proficiency rates rather than individual-level progress over time, thus failing to give credit for all the learning gains promoted by teachers at all points along the scoring spectrum. As an alternative, the federal

*Jesse Jasso copies a word off the board during an English-language learning class at Walnut Middle School in Grand Island, Nebraska, on October 5, 2007. Under the No Child Left Behind Act, schools must report the scores of English-language learners to the federal government and face stiff penalties if their students fail to make the grade.*

government could explore different types of metrics that take improvement into account across the distribution of achievement.

Because the effects of the No Child Left Behind Act depend on what happens in the classroom, it is critical to ensure that teachers respond to the law in productive ways. For this reason, it is equally important for the U.S. Congress to respond to the insights and observations of teachers when considering revisions to the law. Otherwise, it might end up receiving mostly failing grades by the end of its term.

### State Variations

The No Child Left Behind Act is designed to achieve an ambitious goal: *All children will be proficient in reading and mathematics by the 2013–14 school year.* A key strategy for achieving this goal is to hold schools and districts accountable for student mastery of state curriculum standards, as measured by state tests. By 2014, fully 100 percent of students, including special education students and English-language learners, are supposed to score at “proficient” levels in reading and math. Up through 2014, schools and districts are supposed to demonstrate annual progress toward reaching this goal.





Every state must administer annual tests in reading and math for all students in grades 3–8 and at least once in grades 10–12. Every state must also develop annual test-score targets

for all schools and districts, for all students, and for key subgroups of students, including minorities, those with disabilities, and those with limited English proficiency. Beginning in the current school year, all states must further test students in science at least once each in grades 3–5, 6–9, and 10–12.

The law sets up a series of progressively more serious interventions for federally subsidized schools that fail to make adequate yearly progress for two or more consecutive years (see the table). First, such schools become identified for “improvement.” In this stage, the interventions include developing an improvement plan, offering parents the choice to transfer their kids to another public school (beginning in the first year of improvement), and providing supplemental services, such as free tutoring (beginning in the second year).

If an identified school misses its targets for an additional year, the district must take one of several “corrective actions,” followed by “restructuring” if the school misses its targets yet another year. Entire districts can also be identified for improvement. A school or district can be released from improvement, corrective action, or restructuring status only when it makes adequate yearly progress for two subsequent years in succession.

The law requires these interventions only for schools and districts that receive federal Title I funding, which the U.S. Department of Education has been disbursing since 1965 to

Increasingly Aggressive Interventions Await Schools That Fail to Make “Adequate Yearly Progress”				
Stages of Intervention for School Improvement Under the No Child Left Behind Act of 2001				
<i>If school misses “adequate yearly progress” (AYP) for two consecutive years</i>	Identified for Improvement, Year 1	Identified for Improvement, Year 2	Corrective Action	Restructuring
	All interventions must occur simultaneously: <ul style="list-style-type: none"> <li>• Offer parents school choice</li> <li>• Develop improvement plan</li> <li>• Notify parents</li> <li>• Allocate 10 percent of federal Title I funds for professional development</li> <li>• Receive technical assistance from districts and states</li> </ul>	Additional intervention <ul style="list-style-type: none"> <li>• Offer supplemental educational services (tutoring, remediation, or other academic instruction) given by a state-approved provider</li> </ul>	Additional interventions (one or more of the following): <ul style="list-style-type: none"> <li>• Implement research-based curriculum or instructional program</li> <li>• Decrease school’s management authority</li> <li>• Extend school day or school year</li> <li>• Replace staff relevant to school’s low performance</li> </ul>	Additional interventions <ul style="list-style-type: none"> <li>• Phase 1: Develop restructuring plan</li> <li>• Phase 2 (one or more of the following):               <ul style="list-style-type: none"> <li>• Reopen school as a charter school</li> <li>• Replace all or most staff</li> <li>• Contract with another entity</li> <li>• Yield to state takeover of school</li> <li>• Conduct other major governance restructuring</li> </ul> </li> </ul>
	<i>If school misses AYP for an additional year</i> 	<i>If school misses AYP for an additional year</i> 	<i>If school misses AYP for an additional year</i> 	

SOURCE: *State and Local Implementation of the No Child Left Behind Act: Volume III, 2007.*  
 NOTES: In schools identified for corrective action or restructuring, the district must also continue to offer school choice and supplemental services. A school exits school improvement, corrective action, or restructuring status only if it makes AYP for two consecutive years.

schools and districts with high percentages of students from low-income families. States can also extend these interventions to other schools, using state resources.

The accountability system rests on the assumption that clear definitions of desired academic outcomes will provide incentives for improvement. At the same time, however, the federal law allows each state to define what it means to be “proficient.”

States vary widely in their proficiency standards for reading and math. Using a national test—the 2003 National Assessment of Educational Progress (NAEP)—as a common benchmark, the state proficiency standards range from a NAEP-equivalent score of 242 in North Carolina to a NAEP-equivalent score of 314 in Missouri, a range of 72 points on the 500-point NAEP scale. Thus, a student deemed to be proficient in one state might not be considered proficient in another state. The same is true for schools and districts.

Adding to the variations in proficiency cutoff scores, each state charts its own trajectory of expected progress toward universal proficiency. States that originally set high performance standards have tended to have lower percentages of students scoring at the proficient level and must therefore make greater progress. In other words, states with higher standards are likely to face more challenges in reaching 100-percent proficiency.

A study we conducted with the American Institutes for Research found that, as of the 2003–04 school year, 75 percent of the nation’s schools and 71 percent of districts were making adequate yearly progress as defined by their states. The states varied greatly in the proportions of schools and districts meeting the targets, from 95 percent of schools in Wisconsin to 23 percent in Alabama and Florida—and from 100 percent of districts in Arkansas and Delaware to fewer than 10 percent in Alabama, West Virginia, and Florida.

Of the 25 percent of schools that did not make adequate yearly progress, either the whole school or multiple student subgroups missed the mark in just over half the cases. High-poverty, high-minority, and urban schools were less likely to make the grade. When schools did not meet the standard for a single subgroup, it was usually for students with disabilities.

In the 2004–05 school year, states varied hugely in the percentage of Title I schools and districts identified for improvement. For schools, the rate ranged from 2 percent in Iowa and Nebraska to 68 percent in Florida. For districts, the range could not have been wider: from 0 percent in several states to 100 percent in Florida.

## Parental Options

A key aim of the No Child Left Behind Act is to give new options to parents whose kids attend Title I schools that have not made adequate yearly progress toward meeting state testing goals. The two key options are school transfers and supplemental services.

The supplemental services include tutoring, remediation, or other academic instruction given by a state-approved provider, in addition to instruction given during the school day.

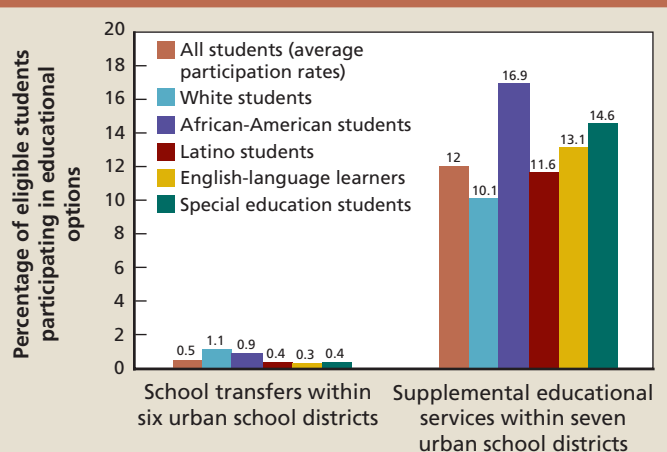
We gathered data on the effects of the two parental options in nine large urban school districts: Baltimore, Chicago, Denver, Long Beach, Los Angeles, Palm Beach, Philadelphia, San Diego, and Washington, D.C. We excluded three districts from the school choice study and two districts from the supplemental services study, because in those districts there were fewer than 100 participating students with test score data that we could track over time.

Participation rates were very low for the school choice option (see Figure 1). Just 0.5 percent of eligible students across the six applicable districts transferred to new schools. Because of the small number of participants in each district, the statistical power of our conclusion is limited. But among the students who transferred across all six of the districts, we found no statistically significant effect on achievement, even though the students generally transferred to higher-achieving schools.

In contrast, 12 percent of the students eligible for supplemental services availed themselves of this opportunity, and the results were much more favorable. In five of the seven applicable districts, students scored better in both reading and math in the first year of participating in the services and even better in the second and subsequent years. Students participating for multiple years enjoyed gains twice as large as those of students participating for just one year. African-Americans, Latinos, and students with disabilities all recorded positive achievement results. All these gains were statistically significant.

Moreover, the students who enrolled in tutoring or other supplemental services had been especially disadvantaged from the outset. On average, they had been lower achievers than other

**Figure 1—Participation Rates Were Lower for the School Transfer Option Than for the Tutoring Option**



SOURCE: *State and Local Implementation of the No Child Left Behind Act: Volume I, 2007.*

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## The disparities in teacher qualifications across types of teachers and schools highlight enduring inequities in access to highly qualified teachers.

eligible students who did not enroll. (In contrast, the school choice participants had prior achievement scores similar to those of other eligible students who did not transfer.)

Compared with other racial or ethnic groups, eligible African-American students had the highest participation rate in supplemental services (with 16.9 percent enrolling in tutoring) and an above-average participation rate in school choice (with 0.9 percent opting to transfer), as shown in Figure 1. Eligible white students had an above-average participation rate of 1.1 percent in school transfers. Eligible Latinos, English-language learners, and students with disabilities had average or nearly average participation rates in tutoring.

Because our findings are based on a small number of districts that are not nationally representative, the results do not represent the national effects of school choice and supplemental services. Nonetheless, the results are important because they are based on data from districts that include a range of the underperforming schools and disadvantaged populations that the No Child Left Behind Act is designed to serve.

And one important factor *does* hold true nationally: Across America, 99 percent of parents of eligible children did not exercise the option to transfer their children from low-performing schools to high-performing ones. Three reasons contributed to this. First, in many districts, there were no high-performing schools to which students could transfer. Second, nearly 20 percent of districts that did have such schools available did not notify eligible families about the transfer option in a clear and timely manner. Third, even when parents were informed of viable transfer options, most parents simply did not want to send their children to a school outside their neighborhood.

### Teacher Quality

Another central goal of the No Child Left Behind Act is to ensure that every child is taught by a highly qualified teacher. By June 2006, in fact, all states were supposed to have ensured that 100 percent of their teachers of core academic subjects—English, reading or language arts, math, science, foreign languages, civics and government, economics, arts, history, and geography—were designated “highly qualified.”

The law requires the states to set standards for teachers to be considered highly qualified and requires districts to notify parents of students in Title I schools if their child’s teacher does not meet the standards. It provides money that states can use to improve teacher certification systems, to recruit and retain highly qualified teachers, and to offer professional development for all teachers. The study, again conducted in collaboration with the American Institutes for Research, analyzed the progress of states, districts, and schools nationwide in implementing these provisions. We found several areas of concern.

The first problem is that state standards concerning who is “highly qualified” vary greatly, both in the passing scores that new teachers must attain to demonstrate content knowledge and in the extent to which state policies give existing teachers credit for years of experience. (These requirements go above and beyond the ordinary teacher requirements of having a bachelor’s degree and full certification.)

For new teachers, many states use different tests to assess teacher knowledge, and even states that use the same test set dramatically different passing scores. For example, out of a maximum score of 200 on the widely used Praxis II test for subject-specific knowledge and teaching skills, the minimum score required for passage ranges from 135 in Mississippi to 168 in Pennsylvania. For existing teachers, some state policies are likewise more lenient than others, with some states weighing experience more heavily than more-direct indicators of subject knowledge.

Among all teachers nationwide, 74 percent said they were considered highly qualified in 2004–05 under the provisions of the No Child Left Behind Act. Nearly a quarter did not know their status, and just 4 percent said they were not considered highly qualified.

In comparison, 15 percent of special education teachers said they were not considered highly qualified, making them almost four times as likely to fall into this category as general education teachers. Just 52 percent of special education teachers said they were considered highly qualified, while 29 percent did not know their status. Another 4 percent said they were exempt from the requirements of No Child Left Behind because of their particular assignments.

Teachers of English-language learners were more likely than others to report that they were not considered highly qualified (6 percent compared with 4 percent). Teachers who were not considered highly qualified were three times more likely to be teaching in high-minority schools than in low-minority schools (7 percent compared with 2 percent) and in high-poverty schools than in low-poverty schools (6 percent compared with 2 percent).

A majority of districts had difficulty attracting highly qualified applicants in special education, math, and science. School administrators in high-minority, high-poverty, and urban districts were also more likely to cite both competition with other

districts and financial obstacles as barriers to recruiting highly qualified teachers.

Nearly all teachers said they participated in professional development pertaining to instructional strategies, but few participated for an extended period of time. During the 2003–04 school year, 90 percent of elementary school teachers participated in at least an hour of professional development for teaching reading, but only 20 percent did so for more than 24 hours. Only 9 percent received extended professional development for teaching math.

If the goal is to improve the teaching workforce and thus to serve students better, several issues demand attention. First, the variation across state policies regarding highly qualified teachers raises questions about whether some states have set standards high enough. Second, the disparities in teacher qualifications across types of teachers and schools highlight enduring inequities in access to highly qualified teachers.

Third, many teachers might not have taken steps to become highly qualified because they were not aware or notified of their status. And fourth, the low proportion of teachers participating in professional development over an extended period of time suggests that more could be done in this area. The potential for the No Child Left Behind Act to effect positive change in the teaching workforce depends, in part, on addressing these issues.

### Classroom Practices

We observed how educators have responded to the new accountability systems in three states—California, Georgia, and Pennsylvania—that represent a range of regions, student populations, and testing approaches. Based on surveys, interviews, and visits to schools in 89 districts across these states, we determined that the No Child Left Behind Act has affected the work of educators both positively and negatively. Our subsequent national study of states, districts, and schools has reaffirmed many of these conclusions.

Majorities of school and district administrators in most of the 50 states have engaged in similar improvement strategies: aligning curriculum with state standards and tests, using data for decisionmaking, and providing extra support to low-performing students. Many superintendents have also provided technical assistance to schools and offered a variety of professional development opportunities for principals and teachers.

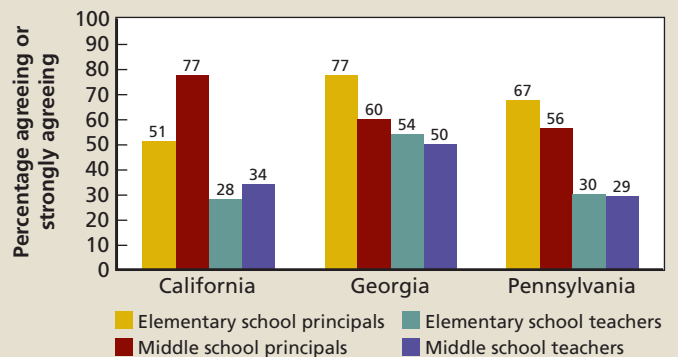
Nationwide, 90 percent of school principals reported placing a major focus on at least one improvement strategy during 2004–05, and most principals reported placing a major focus on multiple strategies. Almost all schools were using test results for instructional planning and professional development. Two-thirds of schools implemented interim tests to monitor student performance during the school year.

Our in-depth surveys in California, Georgia, and Pennsylvania revealed that principals were more positive about the overall

impact of the accountability systems than were teachers, and Georgia educators were more positive than those in the other two states. More than half of principals in all three states reported that their state accountability systems had benefited students in their schools. In contrast, just one-third of teachers in California and Pennsylvania and just over half in Georgia agreed (see Figure 2).

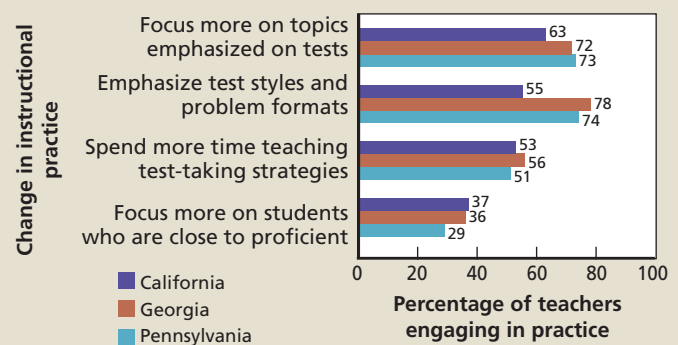
Teachers noted a variety of ways in which the law has influenced their instruction. Some of the changes, such as efforts to align instruction with standards and to improve teaching practices, seem beneficial. But teachers also described responses that seem less desirable: Majorities of teachers in all three states reported focusing on tested topics, emphasizing test styles and problem formats, and spending more time on test-taking strategies; and about a third focused more on students near the proficiency cutoff score (see Figure 3).

**Figure 2—Teachers Were Less Likely Than Principals to Agree That State Accountability Systems Had Benefited Students**



SOURCE: *Standards-Based Accountability Under No Child Left Behind*, 2007.  
 NOTE: Response options included *strongly disagree*, *disagree*, *agree*, and *strongly agree*. Each percentage represents the sum of responses either agreeing or strongly agreeing that the state accountability systems had benefited students.

**Figure 3—Math Teachers Reported Instructional Changes That Might Increase Test Scores but Not Student Understanding**



SOURCE: *Standards-Based Accountability Under No Child Left Behind*, 2007.  
 NOTES: Response options included *not at all*, *a small amount*, *a moderate amount*, and *a great deal*. Shown are the percentages of teachers reporting that they engaged in each practice either a moderate amount or a great deal as a result of the state tests.

The instructional behaviors listed in Figure 3 may cause test scores to rise without a concomitant increase in student understanding of the subject matter. Similarly, the reallocation of effort or resources toward certain topics, activities, or students and away from others could improve school scores while not really improving learning for all students or in all subjects.

Most principals in all three states reported employing various strategies to help teachers prepare students for state tests. As shown in Figure 4, the most common strategies were helping teachers identify content covered on the state test (so that the content could be covered in class) and discussing at staff meetings how to prepare students for the test. Roughly half the principals in all three states encouraged or required teachers to spend more time on tested subjects and less time on other subjects.

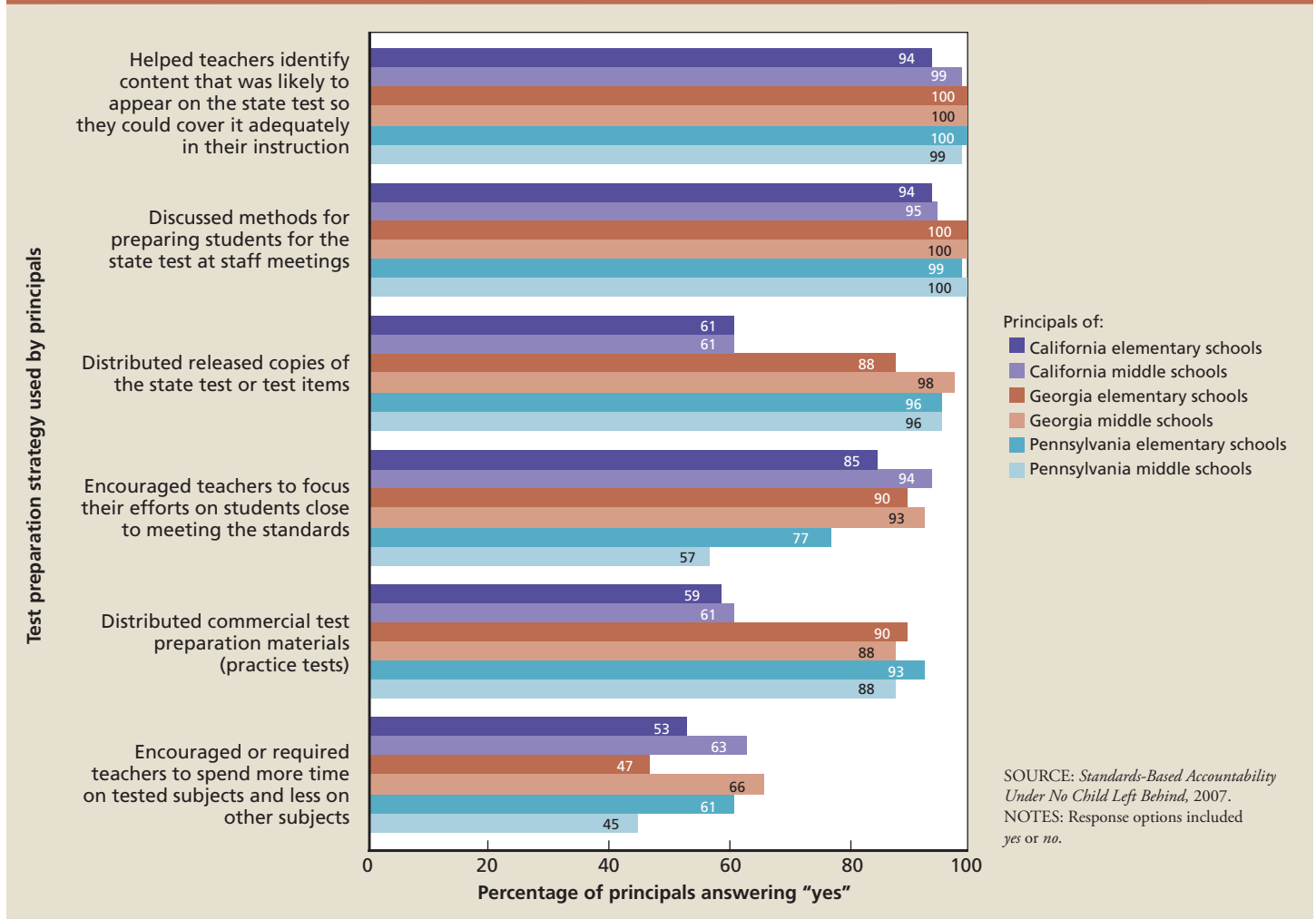
Among the schools we visited, teachers and principals described a wide range of efforts to capture more time for reading and math instruction: eliminating an instrumental music program, decreasing the number of physical education classes

offered each week from five to two, eliminating chorus and assemblies, and refocusing summer school from enrichment opportunities to academic instruction in tested subjects. Several teachers described the resulting dilemma: Activities that teachers believed kept students in school and engaged in learning were exactly those activities that schools cut because of time constraints due to increased pressure to focus on tested subjects.

Parents, too, were concerned about the loss of activities that made schools fun and engaging, such as field trips, parties, and arts instruction. A few teachers reported a need to broaden the curriculum to attract back to the public school system students who had left because of dissatisfaction over test-related curriculum narrowing.

Beyond narrowing the curriculum, some teachers also reported focusing on “bubble kids”—those students near the proficiency cutoff score—and expressed concern that students who are not performing near this level might be shortchanged. As one elementary school teacher told us, “The high-basic child that’s almost

**Figure 4—Principals Reported Using Numerous Strategies to Help Teachers Prepare Students for State Tests**



proficient . . . that's what we call our target group. Every teacher got a printout of their target group. We went over strategies on how to make sure you get them involved. They're the kids that we need to push up to proficient. So, that's our . . . strategy.”

Because the No Child Left Behind Act puts so much emphasis on having everyone score at the proficient level, there is no incentive to help high-achieving students move beyond the proficient to the advanced level. About half the teachers in all three states agreed that, “as a result of the state’s accountability system, high-achieving students are not receiving appropriately challenging curriculum and instruction” (see Figure 5).

An ironic result of No Child Left Behind, according to reports from teachers and parents, is that many high-achieving students are not being pushed ahead. As one perturbed Pennsylvania parent put it: “What’s the teacher spending her time on? Getting everyone to the middle.”

The focus on students near the proficiency cutoff score also raises concerns about the learning opportunities given to low-performing students who are not viewed as likely to achieve proficiency in just one year. In the absence of incentives to improve the performance of these students even if their scores do not approach the proficient level, there is a risk that resources will be diverted away from these students as well.

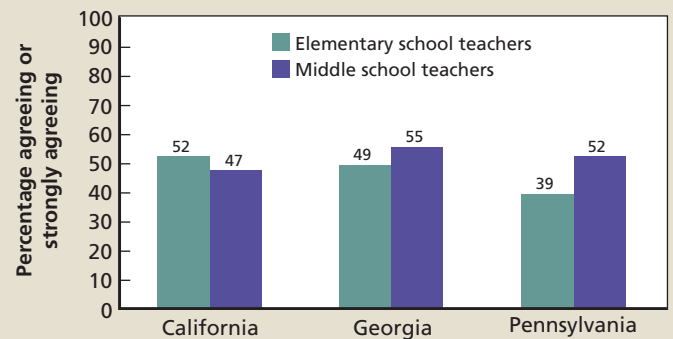
### Performance Measurements

One of the most widespread criticisms of the No Child Left Behind Act is its dependence on measures of achievement that represent the grade-level scores of students at a *single point in time*. Individual growth models are generally preferred because they follow the same students *over time*, defining the performance target in terms of improvement rather than a fixed level of attainment.

Fortunately, one recommendation that is being widely discussed in the law’s reauthorization debate is the adoption of growth-based measurements of student achievement. Some states are now experimenting with growth-based measurements as part of a U.S. Department of Education pilot program. However, this program requires the existing grade-level measurements to continue to be used, and it still requires 100-percent grade-level proficiency by 2014, a goal that many educators view as unrealistic.

Teachers and principals alike doubt the validity of the existing measurements. Teachers are especially concerned that school scores are being influenced by student background characteristics and other factors beyond a school’s control. Adopting alternative performance indicators that mitigate the influence of external factors might increase the likelihood that teachers will view the performance metrics as reflecting their own efforts. And given the widespread skepticism that grade-level targets can

**Figure 5—About Half of Teachers Agreed That High-Achieving Students Were Not Being Appropriately Challenged**



SOURCE: *Standards-Based Accountability Under No Child Left Behind*, 2007.  
 NOTE: Response options included *strongly disagree*, *disagree*, *agree*, and *strongly agree*. Each percentage represents the sum of responses either agreeing or strongly agreeing with this statement: “As a result of the state’s accountability system, high-achieving students are not receiving appropriately challenging curriculum or instruction.”

be reached over the next several years, a growth-based measure might increase the likelihood that educators will view their targets as attainable, perhaps raising their motivation.

Improved performance measurements could also redress the excessive focus on bubble kids. The current focus on proficiency rates creates incentives to move students from just below to just above proficient but fails to reward teaching that does not push students over this threshold (whether because students’ prior performance is far below it or already above it). A growth-based measurement that gives credit for movement all along the achievement scale could still reflect state or national priorities without ignoring certain types of achievement gains. For example, such a measurement tool could incorporate weights that create extra incentives for movement at the lower end of the scale.

Another serious issue is the treatment of students with disabilities and students with limited English proficiency. Under the law, these students are included in school and district scores and, when numbers are sufficient, must meet subgroup targets

**Activities that teachers believed kept students in school and engaged in learning were exactly those activities that schools cut because of time constraints due to increased pressure to focus on tested subjects.**

as well. Educators at all levels in California, Georgia, and Pennsylvania doubted the appropriateness of this policy. More than 80 percent of superintendents believed that special education students should not be included in the proficiency tabulations. More than 80 percent of principals agreed that the system of accountability does not allow sufficient flexibility for meeting the needs of students in special education programs and students with limited English proficiency (see Figure 6).

Among schools that miss adequate yearly progress for just one subgroup, the subgroup that fails to make the cut most often is students with disabilities. School personnel seem acutely aware of this. Teachers often expressed frustration that these students were being blamed for the school’s failure to meet the state standard and that this was hurting their self-esteem. As one teacher lamented, “Every finger is pointing at special education.”

Education policymakers should address the concerns expressed to us by teachers. Their beliefs about subject matter, students, and accountability-related reforms are likely to be important predictors of implementation. The extent to which teachers believe they can achieve the goals of the reforms will also affect their behavior. Because any effects of the No Child Left Behind Act are ultimately going to occur as a result of what teachers do in the classroom, it is critical to ensure that they respond to the requirements of the law in educationally productive ways. For their part, teachers are in a unique position to observe the effects of accountability policies on teaching and learning. Policymakers, therefore, should listen carefully to teachers when considering revisions to the policies.

## On the Bubble

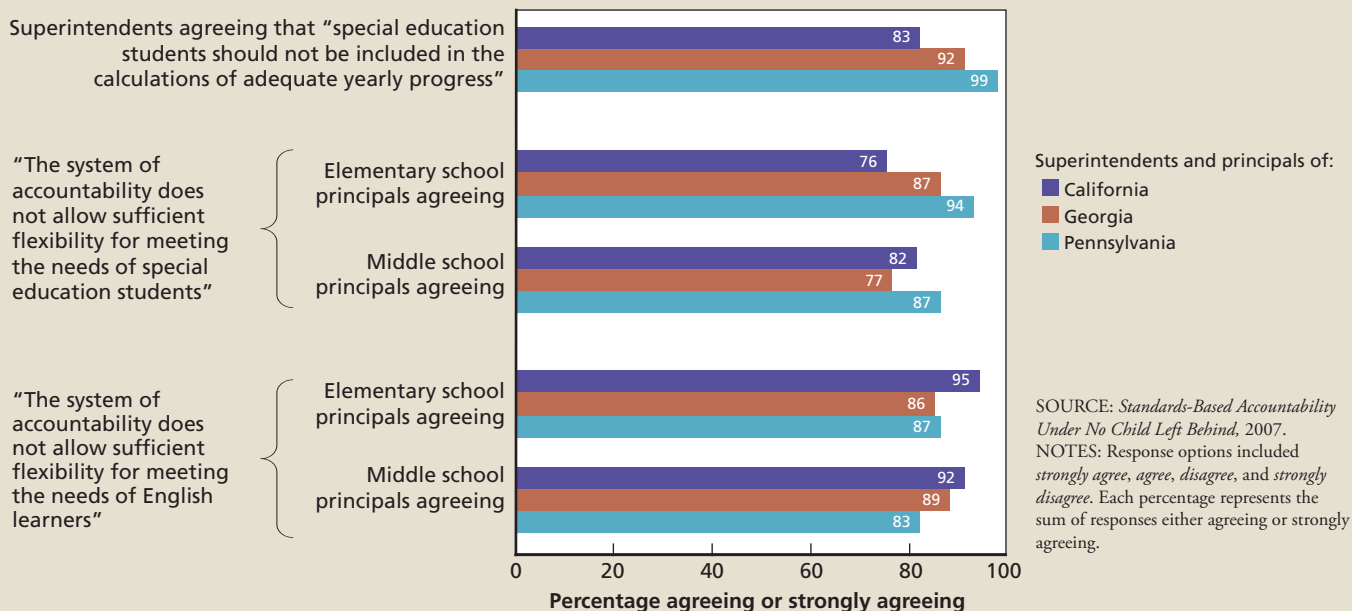
We found some reasons for optimism and several reasons for concern regarding the state accountability systems, parental options, teacher quality provisions, classroom practices, school practices, and performance measurements associated with the No Child Left Behind Act of 2001. The challenge now facing Congress, as it debates the reauthorization of the law, is to maximize its desirable effects and minimize the undesirable ones. The challenge is made tougher by the fact that the data are still coming in. Nonetheless, we offer some tentative recommendations based on the discussion above.

First, if the goals are to foster achievement for all students and accountability for all schools, Congress should require similar yardsticks for all states. Because each state now defines both student proficiency and teacher quality differently under No Child Left Behind, this *already* leaves many children behind their peers in other states.

Second, Congress should make the option of tutoring and other supplemental educational services available to eligible parents in the first year of school improvement rather than waiting for the second year, because this option has shown positive effects on student achievement. Congress should also stress the need for more timely and effective communication to parents regarding the school transfer option so that the long-term data will be more reliable.

Third, Congress should adopt the principle that schools should be rewarded for improving performance across the distribution of achievement, not just at the proficient level. High-

**Figure 6—Superintendents and Principals Agreed That the Accountability Systems Were Too Inflexible to Meet the Needs of Students with Disabilities and of English-Language Learners**



SOURCE: *Standards-Based Accountability Under No Child Left Behind*, 2007.  
 NOTES: Response options included *strongly agree*, *agree*, *disagree*, and *strongly disagree*. Each percentage represents the sum of responses either agreeing or strongly agreeing.

paying jobs in our society will require higher-order skills, and so schools should be encouraged to promote advanced learning for all students. One way to do this would be to design an accountability index that recognizes movement from each level to the next higher level (for example, from the proficient to the advanced level). Such an index is not likely to lead to higher-quality instruction, though, unless the index is tied to assessments that measure the desired outcomes.

Fourth, states should therefore be encouraged to develop assessments that measure higher-order thinking and problem-solving skills. Currently, states tend to rely on multiple-choice tests because they are relatively inexpensive, but many of these tests emphasize only facts and routine tasks. States are likely to need financial and technical assistance to improve their assessments, but the investment may be worthwhile if it promotes better instruction and a broader range of student skills and knowledge.

Fifth, Congress should allow for greater flexibility in the treatment of students with disabilities and those with limited English proficiency. Growth-based performance measurements could still be used to hold schools and districts accountable for improving the achievement of these students, thus allowing them to be included fairly in calculations for the schools.

Sixth, Congress should look beyond math, reading, and science and explore ways to incorporate other important outcomes of schooling into the state accountability systems—including, for example, achievement in other subjects, healthy physical behaviors, and progress through the grades. At the same time, Congress should move cautiously in this direction so that efforts to increase the breadth of the accountability system do not overburden schools and students.

Seventh, Congress should monitor which of the sanctions are working and which are not. Those schools that repeatedly fail to meet state standards are supposed to face severe sanctions, such as the replacement of all staff or the imposition of new public or private leadership. In reality, only about 15 percent of the schools now in restructuring have experienced these harsh sanctions. Most states and districts are opting for lesser sanctions, such as the adoption of a new curriculum. In any reauthorization bill, Congress should include provisions to sort out, from the variety of actions being taken by schools and districts, those that are most effective from those that are least effective.

Continued monitoring will be needed to grade the effects of the No Child Left Behind Act at all levels of the educational system and to ensure that any reauthorized or extended law reflects best practices as currently understood. The studies summarized here, along with others still in progress, should help policymakers identify those areas of the law and its implementation that warrant continuation or expansion and those areas of the law itself that require improvement, corrective action, or restructuring. ■

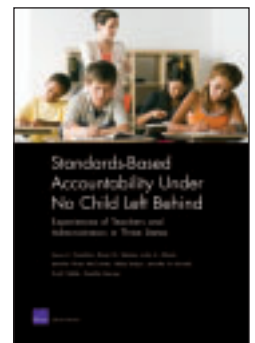
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## **Congress should adopt the principle that schools should be rewarded for improving performance across the distribution of achievement, not just at the proficient level.**

### **Related Reading**

"Revamp NCLB to Fulfill Its Promise," *Baltimore Sun*, September 16, 2007, Brian M. Stecher.

*Standards-Based Accountability Under No Child Left Behind: Experiences of Teachers and Administrators in Three States*, Laura S. Hamilton, Brian M. Stecher, Julie A. Marsh, Jennifer Sloan McCombs, Abby Robyn, Jennifer Lin Russell, Scott Naftel, Heather Barney, RAND/MG-589-NSF, 2007, 302 pp., ISBN 978-0-8330-4149-4, \$32.50.



*State and Local Implementation of the No Child Left Behind Act: Volume I—Title I School Choice, Supplemental Educational Services, and Student Achievement*, U.S. Department of Education, Office of Planning, Evaluation, and Policy Development, Policy and Program Studies Service, Washington, D.C., 2007, Ron Zimmer, Brian Gill, Paula Razquin, Kevin Booker, J. R. Lockwood, Georges Vernez, Beatrice Birman, Michael Garet, Jennifer O'Day. Also available as RAND/RP-1265; as of press time (Web only): [www.rand.org/pubs/reprints/RP1265/](http://www.rand.org/pubs/reprints/RP1265/)

*State and Local Implementation of the No Child Left Behind Act: Volume II—Teacher Quality Under NCLB: Interim Report*, U.S. Department of Education, Office of Planning, Evaluation, and Policy Development, Policy and Program Studies Service, Washington, D.C., 2007, Beatrice Birman, Kerstin Carlson Le Floch, Amy Klekotka, Meredith Ludwig, James Taylor, Kirk Walters, Andrew Wayne, Kwang-Suk Yoon, Georges Vernez, Michael Garet, Jennifer O'Day. Also available as RAND/RP-1283; as of press time (Web only): [www.rand.org/pubs/reprints/RP1283/](http://www.rand.org/pubs/reprints/RP1283/)

*State and Local Implementation of the No Child Left Behind Act: Volume III—Accountability Under NCLB: Interim Report*, U.S. Department of Education, Office of Planning, Evaluation, and Policy Development, Policy and Program Studies Service, Washington, D.C., 2007, Kerstin Carlson Le Floch, Felipe Martinez, Jennifer O'Day, Brian Stecher, James Taylor, Andrea Cook, Georges Vernez, Beatrice F. Birman, Michael S. Garet. Also available as RAND/RP-1303; as of press time (Web only): [www.rand.org/pubs/reprints/RP1303/](http://www.rand.org/pubs/reprints/RP1303/)

# New World Disorder

## Different Types of Ungoverned Territories Warrant Different Responses

By Angel Rabasa

*Angel Rabasa is a RAND senior policy analyst who, from 1976 through 1998, held many U.S. diplomatic and defense positions throughout Latin America, Europe, and Asia.*

Ungoverned territories have become more common since the end of the Cold War, ranging from the Pakistani-Afghan border to the Sulawesi-Mindanao arc, from East Africa to the North Caucasus to Central America. Ungoverned territories pose challenges to U.S. national security as breeding grounds for terrorism and criminal activities and as launching pads for attacks against the United States and Western interests.

Given the pervasiveness of ungoverned territories throughout the world, U.S. officials should treat the phenomenon as a distinct category of security problems that requires unique policies and strategies rather than as a symptom of protracted violence, crime, and poverty. To develop strategies to address the phenomenon, we at RAND specified variables for identifying ungoverned territories and for measuring their conduciveness to a terrorist presence. We then distinguished

among three types of ungoverned territories, suggesting different priorities for each type.

### **Eight Cases**

An ungoverned territory is an area in which a state faces significant challenges in establishing control. Ungoverned territories can be failed or failing states, poorly controlled land or maritime borders, or areas within otherwise viable states where the central government's authority does not extend. These territories can also extend to airspace, such as air routes that drug smugglers use to transport illegal drugs.

We studied eight presently ungoverned territories: the Pakistani-Afghan border region, parts of the Arabian Peninsula, the Sulawesi-Mindanao arc straddling Indonesia and the Philippines in Southeast Asia, the East African corridor from Sudan and the Horn of Africa to Mozambique and Zimbabwe, West Africa from Nigeria westward, the North Caucasus region of Russia, the Colombian-Venezuelan border, and the Guatemala-Chiapas (Mexico) border. These territories are distributed across four continents and include both Muslim and non-Muslim regions.

Across the territories, we assessed two dimensions: "ungovernability" and conduciveness to a terrorist or insurgent presence. Ungovernability means that the state is unable or unwilling to perform its functions. These territories are not devoid of governance, but the structures of authority that do exist are unrelated to the formal institutions of the state.

We used four variables for identifying and measuring ungovernability: the level of state penetration of society, the extent to which the state has a monopoly on the use of force, the extent to which the state

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**These territories are not devoid of governance, but the structures of authority that do exist are unrelated to the formal institutions of the state.**



*Refugee women appear in the Otash refugee camp on the outskirts of south Darfur's capital of Nyala, Sudan, on September 26, 2007. The United Nations warned that Sudan's government was increasing the pressure on Darfur civilians to leave many refugee camps where they had fled to avoid violence—and that government forces were chasing the refugees out of Otash, home to 60,000 people.*

AP IMAGES/ALFRED DE MONTESQUIOU

controls its borders, and whether the state is subject to external intervention by other states. Some of the more complex variables are broken down further. For instance, state penetration of society includes the presence or absence of state institutions, the condition of physical infrastructure, the prevalence of an informal or gray economy, and social and cultural resistance to state penetration.

Not all ungoverned territories are equally inviting to terrorists, and so evaluating a territory's vulnerability to terrorist infiltration requires another set of variables. We used these four to measure conduciveness to a terrorist presence: adequacy of infrastructure and operational access, availability of income sources, favorable demographics, and invisibility. Adequacy of infrastructure and operational access means that a terrorist group must have a basic communications and transportation network, plus a means of transferring funds, to conduct operations and reach targets. Favorable demographics are cultural or social characteristics that can be exploited by terrorists. Invisibility means the ability of terrorists to blend into the population and escape detection.

### **Overlapping Characteristics**

All eight territories show a considerable lack of border control. This suggests that border control is a key variable in identifying ungoverned territories and might be a principal factor in managing them. The presence of organized armed groups outside a state's control is another common characteristic across most regions, as is the absence or weakness of state institutions. Interference by external states does not appear to be a critical factor in most cases, except to the extent that Russia is considered an "external state" in some parts of the North Caucasus.

Favorable demographic and social conditions are key to a region's conduciveness to terrorists. This complex variable comprises the presence of extremist groups, supportive social norms, informal social networks that can be exploited by terrorists, criminal syndicates that can serve as contractors for terrorists, and a preexisting state of violence.

Supportive social norms for terrorists often accompany social and cultural resistance to state penetration. This combination of factors typifies what we define as *contested governance*. Territories characterized by these



AP IMAGES/MOYSES ZUNIGA

*Zapatista National Liberation Army leaders Commander Tacho, Subcommander Marcos, and Major Moises salute during a meeting in Chiapas, Mexico, on July 28, 2007. The rebels have pledged to move away from armed struggle and toward politics but have not clearly defined their new political role more than a decade after seizing several towns in southern Chiapas in a short-lived revolt for Indian rights and socialism.*

two factors are among the areas of highest concern with regard to their potential for becoming terrorist sanctuaries. Chechnya (in the North Caucasus) and Mindanao score high on both counts. These are regions where local armed forces, actively disputing government control, seek to create their own state-like entity.

In contrast, the Latin American and African cases score low or medium on these indicators. This suggests a class of ungoverned territories in which ungovernability derives less from local resistance than from state incompetence or neglect—what we call either *incomplete* or *abdicated* governance. In cases of incomplete governance, the state has the will to exert its authority but lacks the resources. The government cannot maintain a presence that is stronger than competing power centers. The government lacks the capabilities to project rule into the regions. Local officials, where they exist, are inept or are co-opted by criminal organizations.

Abdicated governance amounts to willful neglect. Instead of producing public goods—such as safety, order, infrastructure, and services—the central government abdicates its responsibilities for marginal provinces and regions because it believes that nothing cost-effective can be done or because ethnic minorities with whom the government shares little affinity predominate. In some instances, such as in Saudi Arabia, the central government cedes border security to the local tribes. The North Caucasus also illustrates a type of abdicated governance and the nature of the ungoverned spaces that result, especially as Russian security services collude with illegal armed bands in the region.

These three types of ungoverned territories are not mutually exclusive. The Pakistani-Afghan border represents both contested and incomplete governance, while the North Caucasus contains elements of all three. There is value in identifying the root causes of different cases, however, because they point to different policy options.

When contested governance is the primary source of trouble, U.S. officials face the decision of whether to support the incumbent government. Doing so might lead to policies of counterinsurgency, development assistance, and foreign military financing, training, and education. When incomplete or abdicated governance is the root problem, policies that emphasize development assistance, foreign direct investment, and government reform are probably sound choices. But in certain nefarious cases of abdicated governance, the usual reform mechanisms might not be welcome.

### Overarching Implications

Although ungoverned territories may spring from different sources that require different policy mixes, U.S. policy must always address the two sets of attributes that make some territories actual or potential terrorist sanctuaries: the lack of an effective state presence and the conduciveness to a terrorist presence. In such cases, we suggest this package of priorities to strike the right balance between security and development:

*Reevaluate the role of development assistance.* Currently, the United States tends to emphasize security cooperation and military assistance in dealing with the security problems generated by ungoverned territories. But extending the reach of government should involve other activities, too. One option is to use development assistance as a tool to encourage governments to invest in neglected infrastructure and institutions.

*Improve transportation infrastructure.* This policy could have profound effects in many ungoverned territories by improving the overall mobility within society. Improved mobility means that the police and judicial officials can expand their activities to remote areas; that legal crops can be brought to market at competitive prices, reducing the attractiveness of narcotics and other illicit crops; and that electricity, health care, public education, and the rule of law can reach remote regions of a country.

*Promote competent government practices.* Lack of coordination among agencies is a major obstacle to improving governance in ungoverned regions. Providing expert advice to officials on how to coordinate

actions across departments and minimize bureaucratic competition would be an important step in strengthening public-sector capabilities.

*Promote regional security architectures.* Formal international organizations have a mixed record at best. As an alternative, the United States might promote less formal “regional architectures” to coordinate the efforts of states that share similar concerns about the corrosive effects of ungoverned territories, perhaps extending infrastructure, authority, order, economic activity, justice, and other public goods across multistate regions.

*Mobilize regional organizations.* Despite their unpromising records, existing organizations might prove beneficial when trying to reduce incomplete or abdicated governance or to resolve contested rule. The Organization of American States, the African Union, the Association of Southeast Asian Nations, perhaps the Gulf Cooperation Council, the Organization for Security and Cooperation in Europe, and the Black Sea Economic Cooperation Organization could provide forums for tackling mutual problems, forging cooperative strategies, and marshaling resources.

*Address profound, official corruption directly.* The United States must exercise caution to ensure that its assistance efforts are neither wasted by entrenched corruption in the public administration of recipient countries nor misused as lethal aid that enables a corrupt regime to prolong its grasp on power. Some regimes may not be salvageable.

*Reduce terrorist exploitation of infrastructure.* Terrorists typically need transportation and the ability to transfer money. The United States might help governments deploy well-trained officers in sufficient numbers to detect and apprehend terrorists trying to travel on public transportation. Modern monetary and banking systems with safeguards against money laundering and with software for tracking financial transactions could be an impediment to terrorist transactions.

*Prevent exploitation of assistance programs.* The more that states fail to produce public goods—public health, education, and social welfare services—and become dependent upon nongovernmental and private organizations, the greater the probability that money from the assistance programs will be funneled by sympathizers to terrorists or extremists. U.S. programs that help governments build capacity to produce public goods would eventually reduce the scope of terrorist exploitation.

*Deny terrorists local sources of income.* Terrorists derive income from criminal activity or from the

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**The more that states fail to produce public goods . . . and become dependent upon nongovernmental and private organizations, the greater the probability that money from the assistance programs will be funneled by sympathizers to terrorists or extremists.**

black market or gray economies of the countries they inhabit. The United States therefore might help a government suppress or reduce the criminal activities that fund terrorists. Counterdrug assistance in regions where terrorist groups are involved in the illicit drug trade can also have a counterterrorism effect. At the same time, policies supporting a healthy, growing legitimate economy with expanding job opportunities might help steer otherwise unemployed young men away from terrorist activity.

*Make invisibility more difficult to achieve.* U.S. assistance to help a state control its borders—using instrumentation to detect illegal entrants, coastal surveillance systems, counterfeit-resistant passports, border-crossing watch lists, and biometric identification technologies—would reduce the probability that terrorists could cross borders undetected. Intelligence sharing and warnings could also reduce a terrorist’s anonymity. Expediting communication between intelligence agencies should therefore be an additional priority.

Ungoverned territories stem from deep-seated, long-standing problems in the societies in which they appear. Our recommendations are unlikely to render a region completely inhospitable to terrorism. However, taken collectively, these recommendations would make the region less appealing to terrorists and a more difficult place for them to operate. ■

## Related Reading

*Ungoverned Territories: Understanding and Reducing Terrorism Risks*, Angel Rabasa, Steven Boraz, Peter Chalk, Kim Cragin, Theodore W. Karasik, Jennifer D. P. Moroney, Kevin A. O’Brien, John E. Peters, RAND/MG-561-AF, 2007, 396 pp., ISBN 978-0-8330-4152-4, \$44. As of press time:  
[www.rand.org/pubs/monographs/MG561/](http://www.rand.org/pubs/monographs/MG561/)



# Beating the Odds

## In the War on Terrorism, It Takes Both Skill and Chance



PHOTO: DIANE BALDWIN

**By James A. Thomson**

*James Thomson is president and chief executive officer of the RAND Corporation.*

According to conventional thinking, al Qaeda terrorists or their jihadist proxies should have hit the U.S. homeland again long before now. *More assaults are coming*, we've heard terrorism experts predict since the first hours after the World Trade Center and the Pentagon were attacked on September 11, 2001. *Al Qaeda is merely biding its time.*

But a quick look at RAND's online catalog of terrorism incidents around the world suggests that different factors might be at play. The terrorism incident database ([www.rand.org/ise/projects/terrorismdatabase/](http://www.rand.org/ise/projects/terrorismdatabase/)), compiled jointly by RAND and the Oklahoma City National Memorial Institute for the Prevention of Terrorism, reveals that more than 21,000 terrorist incidents occurred worldwide from mid-September 2001 through October 2007, an amount exceeding nine incidents a day.

That's a big number, even taking into account the near-daily bombings in Iraq. Terrorists have been far from quiescent.

So what's at work here? If terrorism incidents have become part of the world's daily landscape, why—six years on—has there been no repeat attack on U.S. soil? Have the United States and its allies been smart and assertive in preventing a follow-on attack? Or have we been just lucky?

My answer is that we have been both nimble *and* lucky. That said, we can't let down our guard.

Without question, luck plays a large part in counterterrorism efforts. To reduce the odds of another attack, the United States and its allies need luck on

their side: to have a terrorist's backpack bomb fail to detonate as planned, to have an unexpected traffic jam or airport delay interrupt a plot, or to have an Immigration and Customs Enforcement agent grow suspicious at just the right time.

But more often than not, luck is the byproduct of solid planning and adept policy implementation at home and abroad. And our efforts on many fronts have succeeded. Afghanistan no longer is a sanctuary or training ground for al Qaeda. Despite the recent flare-up of Taliban activity there, its days as jihad's Grand Central Station ended in late 2001. Gone, too, is much of Osama bin Laden's command infrastructure. A host of his key lieutenants have been eliminated; others reside in Guantánamo.

We have been equally effective at home. Federal, state, and local authorities are much more aware of intelligence matters and are more willing to share information than they were before September 11. Our intelligence-gathering capabilities are much improved. Ditto for our efforts to harden America's airports, seaports, borders, and public and private infrastructure. In the main, these assets are far more secure today than they were six years ago.

Unfortunately, developments over the past year have diluted these successes. The Internet has proliferated as a center for training and recruitment, fueling the power of the jihadist narrative to pull young recruits into the cause. The border areas of Pakistan have emerged as a jihadist training site, partially reversing the loss of the Afghanistan sanctuary. Taliban forces, financed by a bumper opium crop, have regained a foothold in Afghanistan. The result: al Qaeda's resurgence.

Reversing these trends won't be easy. We'll have to devise policies to eliminate the sanctuaries, especially those in Pakistan, and to quash the Taliban revival in Afghanistan. At home, we'll need to continue strengthening intelligence and policy coordination and to do a better job of allocating homeland security dollars to areas and enterprises that face the greatest threats.

Our luck hasn't run out. But to lower the odds of another attack on the U.S. homeland still more, we'll continue to need nimble policies that create conditions conducive to luck. The nimbler we are, the luckier we'll be. ■

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*Above: Frank Fukuyama (right), director of international programs at the Paul H. Nitze School of Advanced International Studies at Johns Hopkins University and author of *America at the Crossroads: Democracy, Power, and the Neoconservative Legacy*, greets attendees at a June 2006 RAND speaking engagement.*

*Below: RAND's internationally renowned terrorism expert Brian Michael Jenkins, RAND President and Chief Executive Officer James Thomson, and the first Homeland Security Secretary and former Pennsylvania Governor Tom Ridge speak to supporters in Pittsburgh.*



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—*Cyrus Tang, president and chairman of the board, Tang Industries*  
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