



Forecast

this week: **Infectious Disease**

Globalization and freedom of air travel allow a communicable human disease to travel from anywhere to anywhere else within 24 hours. Short of blood tests and lengthy quarantine of travelers there is little that can be done to prevent a carrier of a highly communicable, highly lethal disease walking the streets of a large population centre today. The use of disease as a new asymmetric tactic would make explosives seem primitive. Walking the path to martyrdom through densely populated cities infected with a well-chosen disease, a “dead man walking” could bring havoc – and fear. But if the “terrorists” don’t do it, diseases assisted only by ignorance and negligence may get there first. Broadly speaking, diseases have three sources:

Protozoa – the tiniest of animals typically inhabiting water and other animals as parasites; the commonest example is **malaria**, threatening one-twelfth of the human population, caused by protozoans in the bite of an infected female *Anopheles* mosquito. Such diseases can be prevented by physical interdiction (DDT, mosquito nets) and medication treating or repairing the effects.

Bacteria – microscopic single celled organisms; life would not exist without bacteria in animal digestion, the nitrogen cycle and other essential processes. But some bacteria turn to the dark side – **tuberculosis** readily treatable if diagnosed early is caused by *Mycobacterium tuberculosis*; *Bacillus anthracis* can form hardy air-borne *spores* and cause highly lethal **anthrax**. Common treatments are killing the bacteria before it infects or the use of the appropriate *antibiotic* after infection.

Viruses, the ultimate in simplicity and masters of self-preservation, are simply a *nucleic acid* (DNA or RNA) instruction-set covered by a protein sheath. They reproduce only by penetrating cells and using the cell’s reproductive mechanism to replicate themselves. Variations in copying the code produces *mutations* of the virus. Examples are highly contagious, high lethality **Ebola** caused by an airborne virus spores and **H5N1** (avian influenza) that is highly communicable among some animals but non-communicable (or weakly communicable) to humans. Such infections are commonly prevented or attenuated by injecting a *vaccine*, small doses of crippled or dead versions of the target virus, that teaches the body’s immune system what to kill on sight.

That’s the good news. *DDT* remains the most effective interdiction against **malaria** but it is banned in most developed nations because of the devastating persistent effect on the environment. Use of the wrong *antibiotic*, or misuse, or over-use creates – by *natural selection* – strains of bacteria that are *resistant* to many or all antibiotics. *Mutation* of *viruses* means that the vaccine administered today after three months development may be useless against a mutant version of the virus that appeared in the infected subject yesterday. Simple changes in the protein sheath will render it invisible to an immune system trained by a vaccine to recognise other characteristics. The worst case is when a virus attacks the cells of the *immune system* itself – as with **HIV/AIDS**.

These “second generation” dangers of infectious diseases are not just theoretical. A new strain of **tuberculosis** identified recently in **South Africa** is quickly fatal in HIV/AIDS patients and a disease once thought beaten may spread around the world anew. A mutation in the **H5N1** virus is theoretically possible any day and would make it highly communicable to humans. A range of vaccine-preventable diseases thought to be eliminated in developed countries such as *measles*, *mumps*, *whooping cough*, and *poliomyelitis* are making a reappearance – complacency has led to a drop-off in vaccination and many doctors have “forgotten” to look for these diseases in patients. Neglect of these vaccination programs poses the hazard of self-inflicted epidemics. The over-use and misuse of antibiotics over decades, particularly in the **US**, is acknowledged as a major contributor to new more dangerous strains of pathogens such as some *Staphylococci* that are found only in hospitals.

Apart from these dangers to ourselves, miscreants using asymmetric tactics can bring immense harm to populations by transporting uncommon but highly contagious pathogens to highly populated areas. Whether a pathogen is *weaponisable* is a buzz-word in this field; that is, can it be produced, packaged, transported and effectively deployed in potent, dispersed form. **Anthrax** in *spore* form is well-suited to



this but a range of other pathogens can be presented in a matrix of lethality and deployability. There is little confidence that health infrastructures could cope beyond a few days or weeks against even a small but effective pathogen attack in a large population centre — the health services themselves will be the first victim, followed possibly by public order. Mortality will be a mere detail.

Near-Term	Mid-Term	Long-Term
<p>There is every indication that a public health investment would yield worthwhile benefits in doing the easily do-able — education of doctors and the population about vaccination, misuse of antibiotics, and early detection and treatment of diseases such as tuberculosis.</p> <p>Meanwhile, the security community should continue to inventory the hazards from various pathogens – <i>lethality vs. communicability vs. availability vs. deployability vs. treatments vs. likelihood</i>. A careful study may show that anthrax (and VX) is the least of worries.</p>	<p>The abilities of the biological sciences around the world is as good as scientific discovery allows. The weakest link by far is government coordination in the mitigation of avoidable endemic diseases, fore-knowledge of the logically possible types of pathogen attacks by miscreants, and planning for response in the event of such attacks. Planning and exercises around the world prompted by the perceived H5N1 threat are encouraging but exercises and resource planning should accommodate a <u>range</u> of incubation periods and infection rates. Many variations will provide very bleak results.</p>	<p>Control of airspace, liquids on aircraft, quick temperature measurement of incoming travelers and other measures all mitigate against some forms of biological attack. One scenario worthy of exploring is a highly contagious, highly lethal (or debilitating) disease with a long incubation period and long period of contagion. Concealing a weapon of mass destruction in the cells of the body is simple, cheap, effective, and undetectable until vast numbers of people have been infected. Generally, the actors in this scenario need to be prepared to die but that might not be an impediment.</p>

World Crises	based on monthly assessments by <i>International Crisis Group</i> .
!!! Alert	Israel/Occupied Territories, Lebanon, Somalia, Sri Lanka
↓ Deteriorated	Colombia, Côte d'Ivoire, Haiti, India (non-Kashmir), Iraq, Israel/Occupied Territories, Kashmir, Lebanon, North Korea, Somalia, Sri Lanka, Sudan
↑ Improved	Angola, Cyprus, DR Congo, Timor-Leste

<http://www.crisisgroup.org/home/index.cfm?id=4296>

LEGEND

Hazard Level	Change Codes
	↓ Deteriorated
	• Steady
	↑ Improved
	!!! Alert



Public Daily Brief



Threats

Summary

See daily items on the web at

<http://meta2.com/PDB/pdbDetail.asp?THREATS>

Poverty	• "It is astonishing that we still know so little about what sort of aid works." said the Financial Times [UK] — increased food production won by the chemical-heavy "green revolution" has now been consumed by population increase; <i>rice</i> is set to double in price in the next two years and the prospect of <i>global shortages</i> has returned — the number of obese people in the world now exceeds the number of hungry — the US and Pakistan are planning <i>Reconstruction Opportunity Zones</i> for Pakistan's tribal areas to curb terrorist propensities through economic development.
Infectious Disease	↓ An extremely drug-resistant form of <i>tuberculosis</i> identified in South Africa has almost 100% fatality in <i>AIDS</i> patients and may be transmitted around the world — 4,000 people have died in Malaysia in the last four years because it was not diagnosed early enough. Concerted <i>AIDS</i> lobbying in various places called for the US to address the "disproportionate impact" on <i>black</i> Americans, called for the US to join other advanced nations which all have syringe exchange program, and called on the South Africa government to cease its "lunatic fringe" views on <i>AIDS</i> . The Gates Foundation showed its "family value" colors by saying (for <i>HIV/AIDS</i>) "Abstinence is often not an option".
Environment	• An international conference identified <i>Mercury</i> as a pollutant of "global magnitude" — there were massive <i>oil spills</i> in the Indian Ocean and off the Philippines — Chinese demand was blamed for most illegal logging in old-growth <i>rainforests</i> in Asia — as the <i>Kyoto protocol</i> excludes India and China a more sensible scheme would be based on absolute emission-reduction — one-third of US National Parks are threatened by pollution.
Inter-State Conflict	↓ Attacks on Coalition troops are trending down, but the toll on the Iraqi people is worse than ever with 3,500 killed in July, the highest since the 2003 invasion — Israel expressed concern at Indonesia and Malaysia , which do not have diplomatic relations with Israel, contributing to the Lebanon peace-keeping force — Saudi Arabia , Egypt and Jordan said the time may be right to seek a long-term solution in the Middle East — in an apparent breach of the cease-fire, Israel made a pre-emptive strike in the Bekaa Valley .
Civil War	• Peacekeepers withdrew as civil war intensified in Sri Lanka — Islamists in Somalia seized the port of Hobyoy and reported defections by government troops.
Genocide	• The African Union Mission in Sudan opened a Darfur Peace Agreement Implementation office — a UK-USA proposal pressures Sudan to accept a large UN force to replace the cash-strapped African Union force.
Other Atrocities	• Unrelated <i>human trafficking</i> (sex slavery) syndicates were busted in the US east coast and Indonesia — with amnesty laws now overturned, Argentina is looking at <i>atrocities</i> of 30 years ago.
Proliferation	• [nothing significant to report]
Terrorism	↓ An ex-State Dept policy officer said the relative success of Hizbollah in Lebanon provides a dangerous model that can be emulated elsewhere — it was claimed Al-Qaida's No. 3 masterminded the plot to blow up the Heathrow transatlantic flights — the US Attorney-General Gonzales said terrorists are using the <i>internet</i> — the US President said "the United States of America is engaged in a war against an extremist group of folks" — the first conviction under Australia's new anti-terror laws has been overturned on appeal due to a "technicality" in the collection of evidence.
Transnational Crime	• [nothing significant to report]

↓ deteriorated

• steady

↑ improved

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Public Daily Brief



Policy Summary

See daily items on the web at
<http://meta2.com/PDB/pdbDetail.asp?POLICY>

Agriculture	• Quantities of GM rice invented by Bayer have inadvertently entered the US food supply - it is not approved for human consumption but is said to be "safe".
Debt	• [nothing significant to report]
Diplomacy	↓ An analyst said one fallout from the Lebanon adventure is that not only Israel but also the US suddenly seems no longer invincible — a Professor Emeritus at Georgetown University Law Center argued "American Jewry's identification with Israel is neither good for Israel nor for the United States ".
Economy	• [nothing significant to report]
Education	• Averages in ACT tests are up but the Science results are appalling.
Energy	↑ Biofuels have given new life to agribusiness.
Family	• [nothing significant to report]
Immigration	• Guard troops on the Mexico border are not armed and depend on the Border Patrol for protection.
Justice	• [nothing significant to report]
Security	↓ U.S. governors strongly opposed a proposal that the President would to take control of the National Guard during a national emergency — the Head of Space Command says higher grade intelligence is needed on what other nations are putting into space — FBI's Quantico has 114 hours training in shooting ... and now also one hour in Islamic culture — a federal judge declared NSA warrantless wire-taps unconstitutional — FBI's years of work on a new information system has been shelved after "failures of almost every kind" — the DHS Science and Technology Unit is "hobbled by poor leadership and inadequate technology".
Social Security	↓ The head of a major Mexican cartel responsible for 20 murders and the Tijuana tunnel has been arrested by the Coast Guard and DEA — the indiscriminate use of antibiotics has led to the rapid increase in resistant strains, particularly USA300 first identified in 2000.
Water	• A water conference said a third of the world is facing water shortages because of poor management of water resources and soaring water usage, driven mainly by agriculture .

↓ deteriorated	• steady	↑ improved	!!! ALERT
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Public Daily Brief



Challengers

Summary

see daily items on the web at

<http://meta2.com/PDB/pdbDetail.asp?CHALLENGERS>

Brazil	•	[nothing significant to report]
China	•	Thai media again discussed the 300-year-old idea of the Kra Isthmus canal – an asset for Thailand ; an immense strategic boost for China — perhaps with genuine intent, China acknowledged "breakneck economic expansion is overwhelming official goals to cut <i>emissions</i> and <i>energy</i> use."
India	•	The World Bank noted India's development is impressive as number aggregates but improvement in standards is largely in <i>cities</i> — a former senior intelligence officer presented a detailed critique of why India's Intelligence Bureau is not an equal of Pakistan's SIS and a range of modern challenges.
Indonesia	•	The head of Indonesia's Human Rights Commission said the US "\$6 million blank check" for modernizing the military has some dangers and could go to better causes.
Iran	•	The parliamentary speaker reiterated Iran's position on <i>enrichment</i> , but also the willingness to negotiate — Iran mentioned its 2,000km <i>missile</i> capability doubtless with Israel in mind — a top Iranian general said that superior US fire-power and air-power would be useless in Iran.
Russia	•	Russia met with Belarus, Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan on the Black Sea to discuss a customs union and Central Asia water and energy issues — Singapore will provide consultancy to Russia on the establishment of two special economic zones — the most powerful remaining Chechnyan commander, turned up at a government headquarters and surrendered.
Venezuela	•	A labor-leader opponent of Chavez and three army officers convicted of rebellion have escaped together from prison — Venezuela and China continued fraternal relations, trading a foothold in South America for Chinese investment in oil infrastructure . [see "Hugo Chavez's World Tour", Council on Foreign Relations - USA, 20060816 for a detailed revue of Venezuela's foreign policy and threat posture.]
[wild-card]	•	[nothing significant to report]

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