

THREAT: 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.

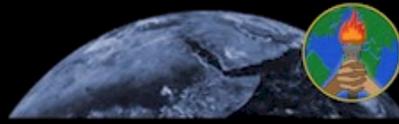
Apart from these dangers to ourselves, miscreants using asymmetric tactics can bring immense harm to populations by transporting uncommon but highly contagious pathogens to highly populated areas. Whether a pathogen is *weaponisable* is a buzz-word in this field; that is, can it be produced, packaged, 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>

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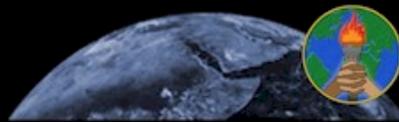
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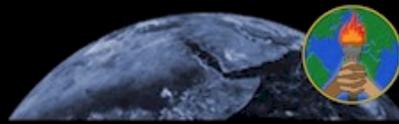
Hazard Level

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

week-ended	See daily list of news items
2007 Jul 01	<ul style="list-style-type: none"> Although the infective <i>diseases of poverty</i> are an immense challenge, the World Bank warns <i>development</i> brings a new range of diseases -- "<i>poor countries are catching up with wealthier nations in terms of cancer, diabetes, obesity, and heart disease.</i>" WHO warns that fatal diseases such as <i>malaria</i> and <i>dengue</i> will increase as <i>mosquitoes</i> spread as a result of <i>global warming</i> -- "... <i>this problem will pose an even greater threat to mankind in coming decades if we fail to act now.</i>" Nepalese researchers have identified a new <i>typhoid</i> treatment that is more <u>affordable</u> and <u>effective</u> than the drug currently recommended by WHO.
2007 Jun 24	<ul style="list-style-type: none"> WHO's new 10-year strategy on <i>Diseases of Poverty</i> will address key <i>bottlenecks</i> to health-care delivery, and <i>local capacity-building</i> in countries where parasitic tropical diseases are endemic -- WHO to Implement New Strategy on Diseases of Poverty. The Philippines has seen a 6.8% increase in <i>dengue fever</i> cases, declaring it now 'hyper-endemic'-- "<i>warmer temperatures caused by global warming make mosquitoes more hungry for blood and therefore bite people more often in order to feed.</i>" <i>Dengue</i> in Singapore also has reached technically 'epidemic' levels -- this number breached the "epidemic threshold" of 378 cases per week for the first time since 2005 and is rising.
2007 Jun 17	<p>↓ Even more obscure diseases are showing signs of <i>drug resistance</i> -- New drug resistance found in river blindness.</p> <p>Health ministers of the <i>Organisation of the Islamic Conference</i> (OIC) in Kuala Lumpur consider a common plan against <i>pandemics</i>, including <i>H5N1</i>, <i>polio</i>, <i>malaria</i> -- Some Muslim states not ready to fight bird flu: WHO.</p> <p>Sometimes fatal <i>dengue fever</i> is sweeping across <i>southeast Asia</i> -- "<i>Climate change is armed with little surprises up its sleeves; one of which is a surge in dengue cases in Southeast Asia.</i>"</p>
2007 Jun 10	<p>↓ WHO tries to keep <i>XDR-TB</i> (<i>extremely drug-resistant Tuberculosis</i>) in the news; XDR-TB is already in 37 countries this year -- with international air travel, "<i>TB anywhere is TB everywhere</i>".</p> <p>In Thailand, the pattern of <i>dengue fever</i> this year was "abnormal"; it had spread to areas that had little record of dengue mosquitoes -- New dengue cases 'linked to climate change'.</p> <p>Reticence in Africa towards <i>vaccination</i> programs may have more to do that <i>criminal misconduct</i> by Pfizer and others than the urban legend of <i>ignorant superstition</i> -- Government blames polio vaccine boycott on Pfizer trials.</p> <p>"Last year, studies into the link between <i>male circumcision</i> and <i>HIV</i> infection in Africa were stopped because the evidence was so striking" -- Mass circumcision to fight AIDS. President Bush announced a five-year, \$30B plan to fight <i>HIV/AIDS</i>. Days later, G8 agreed to a \$60B fund to fight AIDS in <i>Africa</i>, another G8 promise that may or may not live beyond the photo opportunity.</p> <p>A Chinese soldier has died from <i>H5N1</i>, going to confirm that the <i>young and healthy</i></p>



	<p>are peculiarly vulnerable to H5N1. H5N1 has reappeared in Malaysia -- the new outbreak of H5N1 is isolated but is on the outskirts of the Malaysian capital.</p> <p>The Chinese government says <i>organised gangs</i> are behind much of the scandalous and deadly <i>fake drug</i> market; "<i>the gangs involved organised criminals working across national boundaries and faking the drugs on an industrial scale</i>" -- Chinese gangs 'behind fake drugs'.</p>
2007 Jun 03	<ul style="list-style-type: none"> • Malaria and <i>drug-resistant TB</i> are flourishing in Myanmar aided by "<i>simmering civil war, fake drugs and a non-existent health service</i>" -- <i>failed fortress states</i> can be incubators for epidemics that affect everyone. <p>see also: Health</p>
2007 May 27	<ul style="list-style-type: none"> • At least <u>\$316M</u> will be required annually for <i>drugs</i> to combat <i>tuberculosis</i> worldwide. [With the increase in occurrence of the <i>multiple-resistant (MDR)</i> strain, this estimate is liable to increase, as is the necessity to stem the renewed spread.] An Indian study finds <i>MDR-TB</i> has a death rate of <u>42%</u>, and prevalence is higher in the <i>younger, productive</i> age-groups. <p>In Bangladesh the situation with <i>H5N1</i> is presently classed as "<i>serious</i>" and neighboring India is on high alert -- "<i>Bangladesh has a real chance to get the virus under control, if it commits itself to a full-scale comprehensive national control campaign.</i>"</p>
2007 May 20	<ul style="list-style-type: none"> • A professor of <i>epidemiology</i> at the UCLA says the <i>HIV pandemic could have been prevented</i> and explains how to prevent the next potential pandemic -- Researchers Endorse Global Early Warning System to Prevent Pandemics. <p>The UN has again delayed <i>destruction</i> of samples of the <i>smallpox virus</i> -- although officially <i>eradicated</i>, and dangerous, there are scientific reasons to retain samples.</p> <p>There are increasing cases of complications from <i>drug-resistant bacteria</i> among injured US soldiers in Iraq.</p>
2007 May 13	<ul style="list-style-type: none"> • UNICEF has commended negotiations by the Clinton Foundation to reduce prices of <i>second-line AIDS medications</i>. <p><i>Malaria</i> is the leading cause of death for children under the age of five in Africa -- <u>one dies every 30 seconds</u>. [In terms of deaths caused, the <i>mosquito</i> is the <i>world's most dangerous creature</i>, responsible for more deaths than all others together.]</p>
2007 May 06	<ul style="list-style-type: none"> • More on the <i>NTDs (Neglected Tropical Diseases)</i> that affect at least 1 billion people in the world -- Forgotten Diseases. <p>"<i>Assam Tuesday [01 May 2007] sounded a health alert following a malaria epidemic that claimed 25 lives and is affecting about 10,000 people.</i>"</p>
2007 Apr 29	<ul style="list-style-type: none"> • The CDC held a "war game" [<i>exercise</i>] to test responses to an <i>outbreak</i> of an <i>influenza pandemic</i>; the next CDC exercise will assume the outbreak has become a <i>full blown pandemic</i>. In the absence of an <i>influenza pandemic</i> yet, Roche is easing off production of <i>Tamiflu</i>; anecdotal evidence lingers of the possible <i>psychotic (suicidal) side-effects</i> of Tamiflu. <p>Florida experts warn that a new <i>mosquito-borne illness</i> may be headed to the US -- "<i>based on the outbreak in the Indian Ocean, I think that pushes chikungunya right to the front as far as mosquito-borne diseases we need to watch out for.</i>"</p> <p>A new US government investigation has found new <i>pneumonia</i> strains <u>impervious to available vaccinations</u> are fast emerging [particularly in Alaska].</p>
2007 Apr 22	<ul style="list-style-type: none"> • Jakarta [Indonesia] is struggling with a fight against <i>dengue fever</i> because there is a cultural resistance against measures largely accepted in the West -- "<i>most of the residents do not let us enter their homes even though we've already worn uniforms as identification.</i>" <p>In great news for <i>mice</i>, one dose of a <i>new drug</i> cures <i>malaria</i> -- the same synthetic drug modeled on an <u>ancient Chinese herbal folk remedy</u> offers hope to people too.</p>



2007 Apr 15

Bangladesh, another country with large *peri-domestic fowl populations*, is reporting the spread of **H5N1** to more farms.

- **Drug-resistant gonorrhea** is spreading in the **US**; a pox upon the misuse of **antibiotics** -- resistant cases has jumped from less than 1% to more than 13% in less than five years.

The **pharmaceutical** giant **Abbott** said it will cut the price of **AIDS** drugs in some poor countries -- "*Abbott said it would offer its drug Kaletra at a price of \$1,000 per patient per year -- a price lower than generic versions -- to governments of more than 40 countries ...*" [In the face of threats by some countries to blatantly break **patents**, this is as much *enlightened self-interest* as generosity.]

A comprehensive survey of **dengue** in **Latin American**, where it arrived as recently as the 1960s -- [South American arms race against dengue](#).

2007 Apr 08

- ↓ In **India**, 100,000 vaccine doses are about to be destroyed – they were prepared rapidly a year ago as a precaution against an **H5N1** outbreak but have now **expired**. [The high cost of public readiness ...]

Further cases of criminals dumping **fake** life-saving **pharmaceuticals** in the “free market” -- "[We've found all kinds of fakes...like antibiotics and anti-malaria drugs](#)".

A **drug-resistant** flu **virus** has been found in **Japan** – along with the **US**, Japan is an infamous over-prescriber, and drug-resistant viruses are bred by **over-prescription** and **misuse** of medications. The toxic **algae** that causes **ciguatera** is thriving in **warmer**, damaged oceans; **ciguatera** is rarely fatal but can cause two weeks debilitation.

More details in *Scientific American* on efforts to breed the **super-mosquito** that will (hopefully) supplant all others but can not carry the **malaria parasite** -- [A 'Selfish' Solution for Eradicating Malaria](#).

"*This thing has immense potential for social and human destruction*" -- a virulent strain of black stem rust **fungus** affecting **wheat** continues its advance towards the granaries of the world.

WHO is striving to “internationalize” **health security**, to make public health as synonymous with “**globalization**” as **trade** - threats to public health anywhere are the concern of all.

2007 Apr 01

- ↓ **China** confirms the country’s **third** death from **H5N1** so far this year. **Indonesia** confirms three more **H5N1** deaths, taking the death toll from the virus to 69. A meeting of experts agrees that, scientifically, much about the spread of **H5N1** is still a **mystery**, but **early detection** and **early treatment** certainly reduce mortality. The **UN World Tourism Organization** has reviewed procedures in case of an **viral pandemic** -- if **H5N1** goes *human-to-human*, **tourists** will be a major vector.

The **Paraguayan** government’s lack of **planning** is blamed for a surge in **dengue fever** to over 18,000 cases.

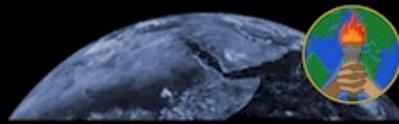
Tuberculosis already kills 4,400 people every day but **WHO** says that **re-treatment** of imperfectly cured cases increases the risk of wider spread of the more lethal **drug-resistant** strains.

2007 Mar 26

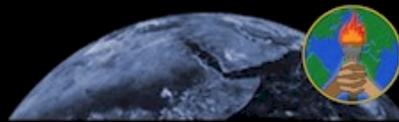
- ↓ **Indonesia** is leading the **world’s poor nations** in challenging the West’s desire to “**privatize knowledge**” for personal profit with products such as vaccines – Indonesia says this issue is a direct threat to global “harmony”.

Tuberculosis cases worldwide has leveled off, but the spread of **highly-contagious drug-resistant TB** continues. Also, a **drug-resistant** form of **the plague** has been identified -- one of humanity’s oldest and most lethal enemies now makes a comeback in a form that cannot be contained by **antibiotics**.

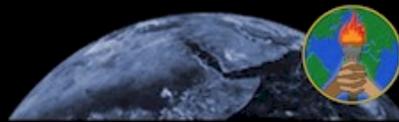
Japan has issued an emergency instruction on [20 Mar 2007] following reports of **teenage suicides** after **Tamiflu** vaccination.



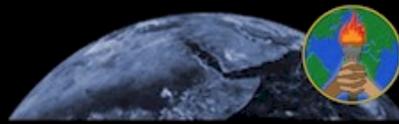
	<p>India says it would be particularly vulnerable to an outbreak of H5NI – it is surrounded by small outbreaks.</p> <p>Scientists are working on a genetically-modified mosquito that can <u>not</u> carry the malaria parasite with the hope they will supplant disease-carrying breeds. [That's the plan.]</p>
2007 Mar 19	<p>↓ The US wargamed an Asian flu outbreak -- "<i>the exercise had identified 'gaps and weaknesses in systems for detecting, monitoring, tracking and containing' pandemic influenza.</i>" Representatives from 30 countries attended the 4th Bird Flu Summit in Washington DC March 14-15.</p>
2007 Mar 12	<ul style="list-style-type: none"> • Paraguay has sacked its chief Health Officer following a dengue outbreak amid allegations that health officials ordered the use of expired chemicals for the fumigation effort against dengue mosquitoes. • DNA evidence has proven that China is the source is of H5NI. [Most likely China's disgusting live animal markets is the source, as it was with SARS.]
2007 Mar 05	<ul style="list-style-type: none"> • Health authorities in Cote d'Ivoire are investigating a yet unknown disease that started to kill people in northern Cote D'Ivoire in December 2006; animals have also died. • French drugmaker Sanofi-Aventis will launch a cheap [around \$1] anti-malaria pill in 10 African countries in April 2007, other countries following. Drug-resistant malaria is now widespread -- "<i>99% of malarial parasites had mutated to resist chloroquine, the standard drug used treat malaria.</i>" • Japan is investigating a possible link between Tamiflu and suicides -- "<i>Roche has been defending its drug since last year, when reports first surfaced in Japan of 'Tamiflu suicides'</i>".
2007 Feb 26	<ul style="list-style-type: none"> • A global healthcare conference in New Delhi [India] hopes to improve healthcare quality in India, and elsewhere. • The inaugural meeting of Friends of the Global Fund Africa resolves to take responsibility and achieve results in the fight against AIDS, TB and malaria. The first death from extreme drug-resistant tuberculosis (XDR-TB) has occurred in the Cape Town area -- XDR-TB has already killed 180 in South Africa. Cameroon is the latest country to join UNITAID, a buying cartel that negotiates low prices on medications and the transport of medications. • As the range of life-saving drugs increases, so do deadly fakes -- "<i>China is the source of most of the world's fake drugs, experts say.</i>"
2007 Feb 19	<ul style="list-style-type: none"> • WHO says one billion are suffering from "neglected diseases" - despite the existence of inexpensive and safe treatment, official incompetence and inaction are the greatest impediment. • Research shows worker migration played a key role in HIV spread in South Africa - "<i>migration of South African workers played a major role in the spread of HIV.... roughly 1,000 AIDS deaths occur in South Africa every day.</i>" A cholera outbreak has spread from Angola to Namibia -- "<i>I cannot recall a case of cholera that was ever recorded in Namibia before.</i>"
2007 Feb 12	<ul style="list-style-type: none"> • Meningitis has killed 96 in Burkino Faso -- "<i>Meningitis is an often fatal airborne infection transmitted through sneezing and coughing that infects the brain and spinal cord.</i>" • Ignorance about AIDS is widespread in Malawi, as is the disease -- "<i>Around 14% of Malawi's 13 million people are infected with HIV.... There are about 78 000 Aids-related deaths every year.</i>" • Michel Kazatchkine, France's ambassador for HIV/AIDS and communicable diseases, has been appointed to lead the Global Fund [a global disease eradication fund].



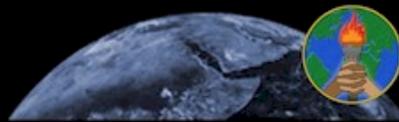
	<p>The UN says "<i>this season's wave of avian flu was largely passed through the poultry trade</i>" -- authorities and locals are refusing to use commonsense in maintaining quarantine areas. FAO again warns that domestic and feral cats may play a dangerous new role in the spread of H5N1. Indonesia's refusal to share H5N1 samples without a promise of non-commercial use has been called <i>reprehensible</i> -- it was then called <i>wise</i>. [<i>Intellectual property</i> and rights to life forms are at play here.]</p>
<p>2007 Feb 05</p>	<p>↓ HIV/AIDS is increasing among South Africa's rich and best-educated -- "<i>The high risk group is growing, it is getting older and it is getting richer. This could represent a whole new wave of the epidemic.</i>"</p> <p>After more than a month in northern Kenya where it killed 478 people and infected 33,000 Rift Valley Fever has now spread into Kenya's central province.</p> <p><i>Home test kits</i> are recommended in malaria-prone areas to lower deaths rates -- "<i>The study found that the rapid diagnostic kits helped to reduce malaria deaths in the region by nearly one third in four years.</i>"</p> <p>Brief WHO data on H5N1 shows 165 deaths from 271 cases (61% fatality) in 11 countries. An outbreak on an English farm was confirmed to be H5N1. Indonesia is about to declare a H5N1 "disaster" -- "<i>the president has indicated he will declare it a national disaster so money can be allocated from the state budget's disaster fund.</i>"</p> <p>Russia's chief medical officer is unconcerned over any outbreak of the virus -- "<i>vaccinations against influenza reduced the risk of contracting the new disease by humans.</i>" Experts called for monitoring of cats and dogs for H5N1 -- "<i>They worry that if the virus adapts to mammals it could more easily spread among people.</i>"</p> <p><i>Reuters</i> published a brief chronology of H5N1 incidents since January 2006 -- Bird flu developments.</p> <p>In Angola deaths from cholera have risen sharply after floods -- "An average of 90 cases of the potentially fatal intestinal infection are being reported each day..."</p>
<p>2007 Jan 29</p>	<p>↓ The virulent strain of TB detected in South Africa may imperil millions -- "<i>South Africa's sluggish response ... could prove hugely expensive to contain and could threaten millions across sub-Saharan Africa.</i>" "XDR-TB represents a major threat to public health. If the only way to manage it is to <u>forcibly</u> confine then it needs to be done."</p> <p>The virus H5N1 was reported in new locations such as Japan.</p> <p>The US Armed Forces Institute of Pathology has recorded seven deaths caused by rare bacteria in US hospitals along the evacuation chain."</p> <p>A forum of scientists has again voted for <u>sanitation</u> as the greatest medical advance ever -- the past is a guide for the future: sanitation is the best first investment.</p>
<p>2007 Jan 22</p>	<p>↓ At least 1,000 people have died in one week in south Sudan from meningitis and another unknown disease similar to yellow fever. Measles deaths are down 60% in six years -- "<i>Our promise to cut measles deaths by half ... has been surpassed in just six years with Africa leading the way.</i>" In Indonesia, Jakarta's hospital facilities allocated to H5N1 [bird flu] is overwhelmed with patients -- the numbers are still smaller than road fatalities but the theoretical risk is high. A cholera outbreak in Angola has killed 2,760 -- although it can be treated easily, cholera is a major killer in developing countries through lack of clean water.</p> <p>The new strain of wheat rust discovered in 1999 <u>capable of destroying most disease-resistant wheat</u> is on the move and has already crossed the Red Sea from Africa.</p>
<p>2007 Jan 15</p>	<p>• "Neglected tropical diseases (NTDs) affect several hundred million people, and kill at least half a million annually."</p> <p>An Indonesian woman is another death by H5N1.</p> <p>A few billion from do-gooders is not enough to eradicate tuberculosis world-wide -- it will need a one-time effort of many billions.</p>



	<p>Kenya welcomes US help against an outbreak of <i>Rift Valley Fever</i> -- the highly contagious viral disease is spread from animals to humans through <i>mosquito</i> bites. Ghana, Kenya, Gambia, Mozambique, Tanzania and Senegal are currently taking part in the phase two trials of a <i>malaria vaccine</i> that may be available for use by 2011.</p>
<p>2007 Jan 08</p>	<p>↓ Scientists warn that <i>Tamiflu</i> use could devastate wildlife and trigger a <u><i>second, deadlier pandemic</i></u> when millions of doses of it enter the biosphere via sewerage. A meningitis death spurred a search for 80 at-risk contacts – diseases such as <i>bacterial meningitis</i> can cause as much terror as any jihad. Nearly 200 people have now been diagnosed with <i>malaria</i> since Jamaica’s first outbreak of the disease in four decades. The new head of WHO renews warnings on <i>H5N1</i> -- "Dr Chan pledged to take a hard line on countries that do not ... carry out checks against bird flu or hinder global efforts to develop <i>vaccines</i>." Experts said a change in guidelines could help eliminate <i>TB</i> in the US -- "...reclassify all foreign-born residents from high-incidence countries as 'high-risk', regardless of the amount of time they have lived in the US."</p>
<p>2007 Jan 01</p>	<ul style="list-style-type: none"> • The <i>VScan</i> rapid test kit just released is said to be a single use, accurate, cost effective, test for the screening of <i>HIV 1&2, Hepatitis B&C, TB, Dengue, West Nile, Malaria, ...</i>
<p>2006 Dec 25</p>	<ul style="list-style-type: none"> • A Mall Santa in the US was found to be an asymptomatic carrier of <i>meningitis</i> after he had contact with numbers of children. Researchers applied historical death rates to modern population data and found a modern <i>influenza pandemic</i> could take <u>51 million to 81 million</u> lives. Fresh outbreaks of <i>H5N1</i> are reported in Vietnam and Nigeria; in Egypt, <i>H5N1</i> was diagnosed too late to save a victim. An experimental <i>vaccine</i> "that theoretically could eliminate <i>malaria</i> from entire regions by killing the malaria parasite in an area’s mosquitoes..." is under review in <i>Africa</i>.
<p>2006 Dec 18</p>	<ul style="list-style-type: none"> • A new study finds India has <u>fewer <i>HIV</i></u> infections than thought -- "<i>The government method gives a flawed picture.... one reason might be that the clinics are used by the segment of society in which <i>HIV</i> is most prevalent.</i>" <i>Nurses</i> – underpaid (or unpaid) and in a hopeless battle are fleeing the "<i>HIV/AIDS</i> frontline" – a sad note in Swaziland hospital says "<i>Swaziland is dying. Will the last nurse on duty please turn off the lights.</i>" The <i>drug resistant TB</i> recently identified in southern <i>Africa</i> has been found to be <u>more severe</u> than thought -- "<i>We are simply not getting the funding for new drugs and vaccines that is required.</i>" The Gates Foundation will release \$83M for prevention and mitigation of <i>malaria</i>, which kills <u>2,000 children in Africa</u> each day. The US is seeking to join increased efforts by the World Bank and various global funds and has added eight <i>African</i> nations added to US anti-malaria plan. The (four-star) charity Islamic Relief summarized its <i>anti-malaria</i> and other work in <i>Africa</i>.
<p>2006 Dec 11</p>	<ul style="list-style-type: none"> • About 90% of <i>malaria</i> infections are in <i>Africa</i>; but about 40% of the world’s population, mostly people living in poor countries, are at. There is a minor outbreak of <i>malaria</i> in Jamaica. The White House Summit on Malaria will be held on 20061214. An international effort aims to produce a "Malaria map" In <i>Africa</i>, <i>Ebola</i> has killed 5,000 gorillas; <i>Ebola</i> hemorrhagic fever is one of the most virulent viruses ever seen -- "A quarter of the gorillas in the world have died from <i>Ebola</i> in the last 12 years." Scientists say <i>malaria</i> fuels the spread of <i>AIDS</i> in <i>Africa</i> -- "The way the two diseases interact greatly expands the prevalence of both among people in sub-Saharan Africa." Former President Clinton holds up Cambodia’s <i>AIDS</i> effort as model -- "There is a hope that Cambodia can be a model for the rest of Asia and perhaps for the rest of the world."
<p>2006 Dec 04</p>	<p>↓ By 2020, losses to the labor force of some of world’s poorest nations due to the AIDS are likely to reach 86 million people a year, compared to an estimated 28</p>

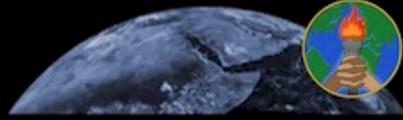


	million for 2005.
2006 Nov 27	<p>↓ <i>Chikungunya</i> [spread by <i>Aedes aegypti</i>, the malaria mosquito] has arrived in the US – it could end up being “more dangerous to public health than <i>West Nile</i> virus.” The WHO African Regional Health Report says <i>local solutions</i> fit best -- “there are public health solutions that work in the African setting”.</p>
2006 Nov 20	<ul style="list-style-type: none"> • Diseases will take new geographic and demographic patterns - “There is a need for the re-orientation of health structures to incorporate <i>climate change</i>.”
2006 Nov 13	<ul style="list-style-type: none"> • Debate continues since the <i>New Scientist</i> article of 20061030 on the virulence of the new <i>H5N1</i> strain originating in China; most concerning is the Chinese attempt to <u>conceal the facts</u>. <p>A position some regard as the second most-important in the UN system, head of the World Health Organization has gone to the former Hong Kong director of public health, a Chinese national and “<i>bird flu</i>” expert.</p> <p>During a week of aid, trade, and diplomacy, China has vowed closer cooperation with <i>Africa</i> in fighting HIV/ AIDS, and <i>malaria</i>.</p>
2006 Nov 06	<p>↓ Once common <i>food-borne bacteria</i> in the US are evolving into more dangerous strains, prompting a rethink of how fresh produce is tested and handled.</p> <p>A new vaccine offers hope against “<i>superbugs</i>” found in hospitals.</p> <p>On 15 Nov 2006, WHO will launch the International Medical Products Anti-counterfeiting Taskforce (IMPACT) and unveil the global plan to combat <i>counterfeit medications</i>, a growing problem in developing countries.</p> <p>A <i>new strain</i> of <i>H5N1</i> which has jumped current disease control measures and spread rapidly is resistant to existing vaccines -- “However, we don’t have any evidence to show whether this virus is more dangerous or less dangerous than any other H5N1 viruses,”</p> <p><i>Tuberculosis</i>, the world's deadliest curable infectious disease, has appeared in a new strain XDR (<i>extremely drug resistant</i>) that is virtually incurable with existing antibiotics.</p>
2006 Oct 30	<p>↓ With almost one-third of the total 1,500 cases in the world, India is a big stumbling block in struggle to eradicate <i>polio</i>. Almost 6 million Angolan children have been vaccinated against <i>polio</i>, and another vaccination campaign has been programmed for late 2006.</p>
2006 Oct 23	<ul style="list-style-type: none"> • Around 2.5 million people die from <i>tuberculosis</i> around the world each year – discovery of an “alarm” effect in the body’s defense system may be a step towards a new medical tool. There is presently no cure or vaccine for either the <i>Marburg</i> or <i>Ebola</i> virus but a new discovery of how these <i>filoviruses</i> work may lead to an answer. The death of a 67-year-old woman in Java [Indonesia] brought the world total death toll from <i>H5N1</i> to 147 since 2003. WHO announced “a milestone for vaccine development” in <i>H5N1</i> prevention.
2006 Oct 16	<ul style="list-style-type: none"> • Field trials researching disease in Brazil using philanthropic funds highlight that <i>pharmaceutical</i> companies do not develop medications for the 2.7 billion people with “<i>neglected diseases</i>”. <p>Thai researchers have developed a fast and accurate test for patient resistance to <i>Tamiflu</i>, avoiding fatal delay in treatment and the risk of spawning new resistant strains of <i>H5N1</i>.</p> <p>Cases of paralysis in Canada from <i>botulism</i> in carrot juice was probably caused by <i>improper refrigeration</i>. A deadly outbreak of E. coli (<i>Escherichia coli</i>) carried by <i>spinach</i> and <i>lettuce</i> was traced to <i>irrigation water</i>, showing a system that quickly delivers fresh food across the country can just as quickly spread deadly bacteria.</p>
2006 Oct 09	<ul style="list-style-type: none"> • With 50 million cases of <i>dengue</i> each year mainly in SE Asia, experts call for a “back-to-basics” mosquito eradication to fight it.



	<p>Drowning is not the only hazard from flood-waters -- 138,000 flood victims became ill after contact with <i>flood waters</i> in Thailand.</p>
2006 Oct 02	<ul style="list-style-type: none">• In (the Islamic regions of) Nigeria, rumors that <i>polio</i> vaccine are “an evil conspiracy hatched in the West to sterilize Nigerian girls” has cut the numbers being vaccinated.
2006 Sep 25	<p>↓ Malaysia has established a new <i>BSL3</i> facility that can handle "all kinds of viruses and diseases, including SARS, Nipah virus, avian flu, tuberculosis and anthrax." The worst forms of the killer <i>tuberculosis</i> bug are gaining ground in the United States. <i>Polio</i> is making a comeback in India because inoculation has been neglected.</p>
2006 Sep 18	<p>↓ Two more died in Chicago from <i>West Nile</i> virus; 20% of infected people will get sick — a new <i>polio</i> strain from Uttar Pradesh [India] is now being found across the world. It’s not in the headlines as often, but the hazard from <i>H5N1</i> is undiminished, and new World Bank estimates of cost are up. WHO has officially approved spraying <i>DDT</i> indoors despite the risks to fight the 1 million <i>malaria</i> deaths each year.</p>
2006 Sep 11	<ul style="list-style-type: none">• [nothing significant to report]
2006 Sep 04	<ul style="list-style-type: none">• A new test kit comprising a microchip covered with bits of genetic material cuts diagnosis time for the lethal <i>avian flu</i> strain from a week or more less than a day.
2006 Aug 28	<ul style="list-style-type: none">• A new anti-<i>malaria</i> medication (<i>Coartem</i>) together with a treatment regime has been introduced in Angola.
2006 Aug 21	<p>↓ 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".</p>
2006 Aug 14	<ul style="list-style-type: none">• [nothing significant to report]
2006 Aug 07	<p>↓ Complacency and ignorance is leading to neglect of <i>vaccination</i> in the West and diseases once eradicated are now returning.</p>
2006 Jul 31	<ul style="list-style-type: none">• While the West notices a spectacular improvement in average health and life expectancy – due partly to childhood <i>vaccination</i> beginning in the 1950s – no such improvement is seen in the developing world, but programmes that work are being started almost daily as resources become available.
2006 Jul 24	<p>↑ The Gates Foundation provided funds for an <i>AIDS</i> vaccine research network, the largest ad hoc scientific network yet created.</p>
2006 Jul 17	<ul style="list-style-type: none">• [nothing significant to report]
2006 Jul 10	<ul style="list-style-type: none">• A vaccine against <i>H5N1</i> is ready for human testing and a new cheap <i>HIV/AIDS</i> medication is ready for distribution; however a fight among the G8 is stalling other vaccine plans and further reasons emerged not to use <i>DDT</i> in treating the world’s greatest killer, <i>malaria</i>.
2006 Jul 03	<ul style="list-style-type: none">• The cholera outbreak in Angola demonstrated that the means to prevent disease may be available in-country but corruption and incompetence may prevent it being deployed.

Commencement of Service



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