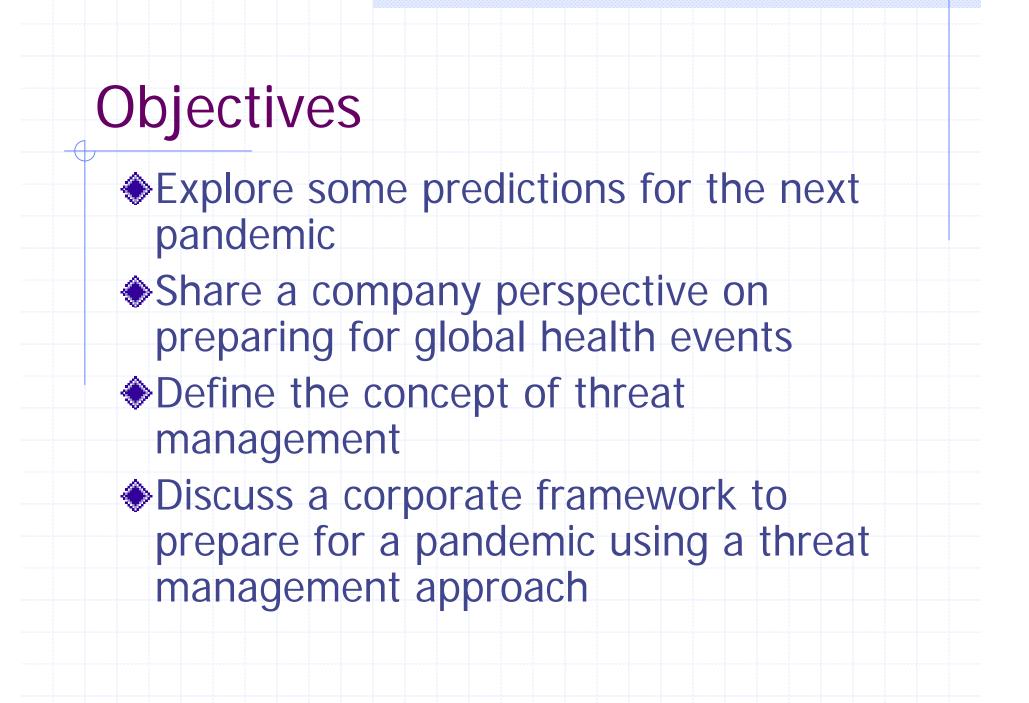
Taking a Threat Management Approach to Pandemic Preparedness

Baxter Healthcare Corporation Sharon Kemerer Corporate Director, OH





### Baxter International Inc.

A diversified healthcare company focused on medical devices, pharmaceuticals and biotechnology



Our products and services help treat people around the world with complex conditions — from hemophilia to cancer and immune disorders to kidney disease.



### **Global Presence**

- Approximately 47,000 employees around the world in more than 250 facilities
- 64 manufacturing facilities in 28 countries
- Local presence in more than 110 countries



Baxter's Global Manufacturing Facilities

### **Medication Delivery Business**

- Systems to deliver fluids and medication to patients.
  - IV therapy/nutrition
  - Infusion systems
  - Drug delivery
  - Anesthesia/critical care





### **Renal Business**

 Systems and products used in the treatment of people with kidney disease
 Renal therapies
 Peritoneal dialysis



### **BioScience Business**

Biopharmaceuticals and devices for chronic conditions, including hemophilia, immune deficiencies and other blood-related disorders

- Recombinants
- Plasma-based products
- Vaccines\*\*
- BioSurgery
- Transfusion therapies



### Quotes from the experts

The risk of an avian influenza pandemic is real and not exaggerated. This is a global problem."

> Lee Jong-Wook, Director-General, WHO

If we had a massive pandemic tomorrow, all of us would be in very serious trouble."

> Anthony Fauci Director, National Institute of Allergy & Infectious Disease

### And more...

#### Complacency is our worst enemy." Julie Gerberding, MD, MPH, CDC Director February 2006

#### The pandemic influenza clock is ticking. We just don't know what time it is."

Dr. Ed Marcuse, former member Advisory Committee on Immunization Practices

# Pandemics in the Past 300 Years

Range: 10 to 49 years between pandemics. Average: 24 years 1732-33 The Great 1781-82 Influenza 1800-02 1830-33 1847-48 1857-58 It's been 38 years since the 1889-90 last pandemic 1918-19 1957-58 John M. Barry author of Rising Tide 1968-69

#### Past Pandemics

1918-1919 over 40 million deaths

1957-1958 over 1 million deaths



# **Current Countries with Bird**

# Cases

	Egypt	$\diamond$	Jordan	۲	Serbia
	France	٢	Kazakhstan	٨	Slovakia
	Georgia	$\diamond$	Korea	$\diamond$	Slovenia
Austria	Germany	۲	Kuwait	۲	Spain
Azerbaijan	Greece		Laos	۲	Sudan
Bosnia	Hong Kong		Malaysia		Sweden
A Dulgaria	Hungary		Mongolia		Switzerland
A Durking Eggs	India		Myanmar	١	Thailand
Combodio	Indonesia		Niger	۲	Turkey
Cameroon	Iran		Nigeria		Ukraine
le China	Iraq		Pakistan		United Kingdom
Croatia	Alerael		Palestine		Vietnam
Czech Republic	<ul> <li>Italy</li> </ul>		Poland		
A Donmark	<ul> <li>Ivory Coast</li> </ul>				
Djibouti	<ul><li>Japan</li></ul>		Russia		56 so far

### Current Case Count -- WHO

#### Cumulative Number of Confirmed Human Cases of Avian Influenza A/(H5N1) Reported to WHO

#### 27 February 2007

Country	20	003	20	04	20	05	20	006	20	007	Total	
	cases	deaths										
Azerbaijan	0	0	0	0	0	0	8	5	0	0	8	5
Cambodia	0	0	0	0	4	4	2	2	0	0	6	6
China	1	1	0	0	8	5	13	8	0	0	22	14
Djibouti	0	0	0	0	0	0	1	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	4	3	22	13
Indonesia	0	0	0	0	19	12	56	46	6	5	81	63
Iraq	0	0	0	0	0	0	3	2	0	0	3	2
Lao People's Democratic Republic	0	0	0	0	o	0	o	0	1	0	1	0
Nigeria	0	0	0	0	0	0	0	0	1	1	1	1
Thailand	0	0	17	12	5	2	3	3	0	0	25	17
Turkey	0	0	0	0	0	0	12	4	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	0	0	93	42
Total	4	4	46	32	97	42	116	80	12	9	275	167

Total number of cases includes number of deaths. WHO reports only laboratory-confirmed cases. All dates refer to onset of illness.



Predictions for the next pandemic \$2 – 10 million deaths

- 10 40 million will require medical attention
- Uncertain health system capacity
- Travel restrictions
- Essential service breakdown
- Businesses and schools may close

Number of Episodes of Illness, Healthcare Utilization, and Death Associated with Moderate and Severe Pandemic Influenza Scenarios

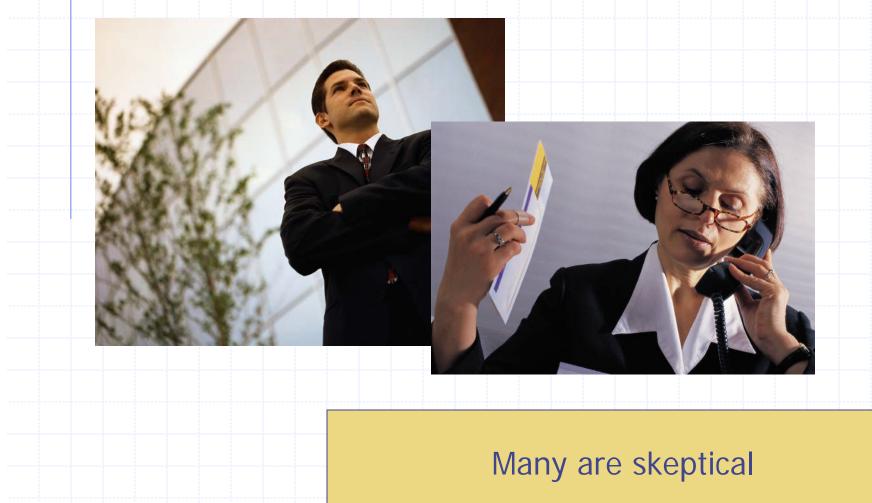
**US Department Health and Human Services** 

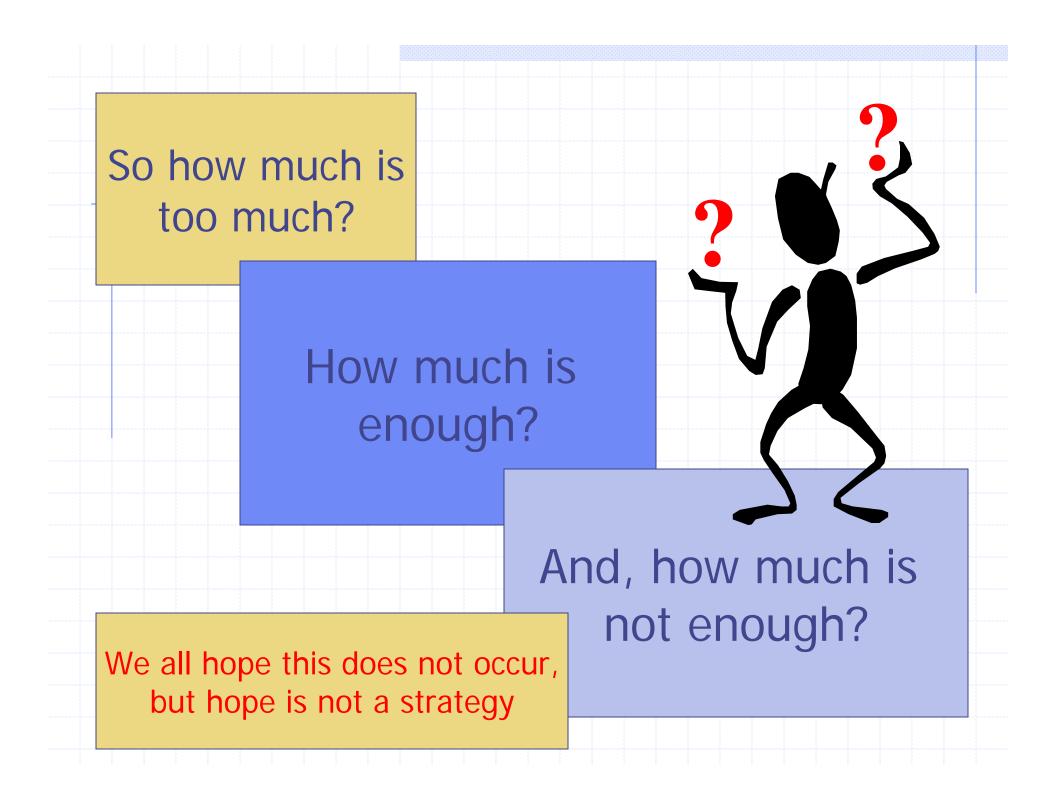
Characteristic	Moderate (1958/68-like)	Severe (1918-like)	
Illness	90 million (30%)	90 million (30%)	
Outpatient medical care	45 million (50%)	45 million (50%)	
Hospitalization	865,000	9,900,000	
ICU care	128,750	1,485,000	
Mechanical Ventilation	64,975	742,500	
Deaths	209,000	1,903,000	

# WHO, UN, CDC, DHS Advice to Business

- Pandemics are global events but they are experienced at the local level
- Businesses should plan to provide essential services in the face of sustained and significant absenteeism
- Business plans should be integrated with local community planning
- Central governments will have limited resources – most decisions will be made locally

### But on the other hand...





For Baxter, it's a special challenge

 Global presence
 Need to protect our employees
 Need for business continuity
 Our products are essential to surviving a pandemic from influenza





### What's the threat to Baxter?

Travel restrictions
 Employee illness
 Production restrictions
 Facility shut down
 Security risk
 Severe business impact

### What are we doing?

- Global task force formed in August 2005 by EHS – evolved into global threat management team
- Training conducted in Singapore and Shanghai in November 2005
- Taking a Threat Management approach
- Parallel business, regional and country teams forming
- Food safety policy and guidance developed
- Avian Flu information materials produced on an ongoing basis

Baxter's Threat Management Process

# Action *Before* a Crisis Occurs

# Why THREAT management?

- Preparation for a pandemic will get a business ready for a variety of threats
- Through anticipation and proper contingency planning, many threats can be avoided or contained
- You can't wait until something becomes a crisis to act

#### The message

"Time spent on pandemic planning is NOT a waste of time – it will help in a variety of situations"

# Threat Management Key Ideas

#### What is a threat?

#### An event with potential adverse impact on:

- The health and safety of the public, or the Baxter team
- Our ability to do business
- Our reputation

#### **Desired Outcomes**

- Prevention
- Minimized impact
- Manage for the best outcome
- Manage to closure

# **Classifying Threats**

ISSUE

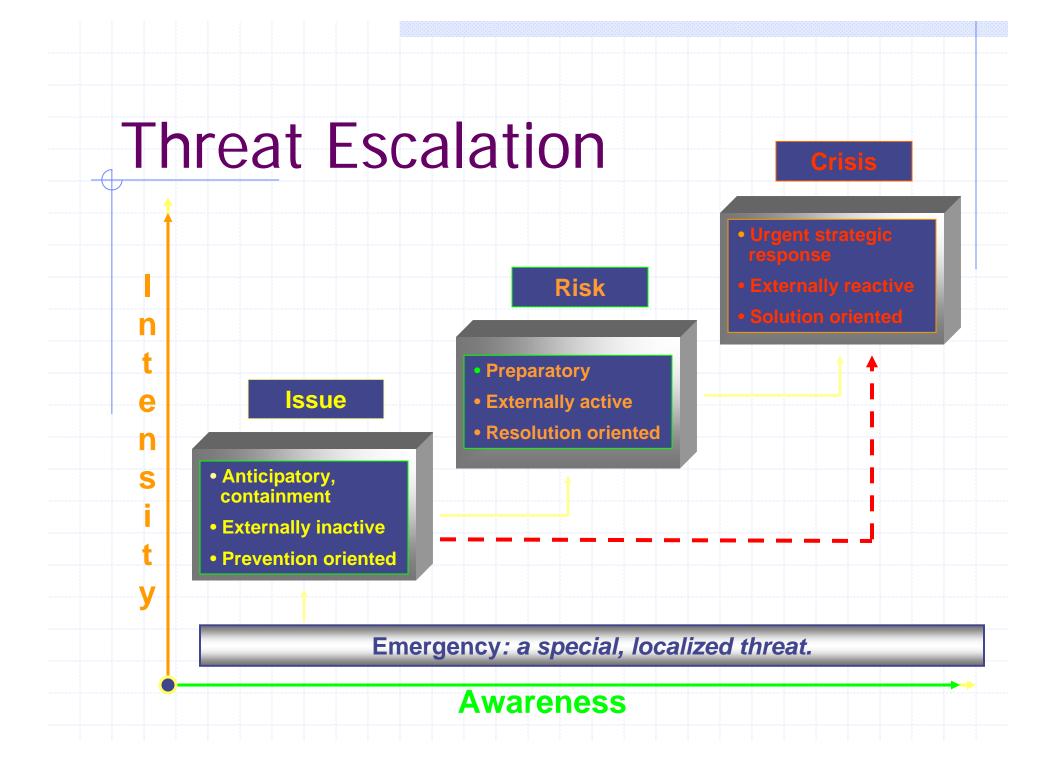
**RISK** 

CRISIS

*potential* threat to the company or its products and key stakeholders. Knowledge or awareness of the threat's consequences to Baxter is limited to the company's management. An issue is the proverbial "red flag" because, if managed properly, it can be minimized or alltogether mitigated.

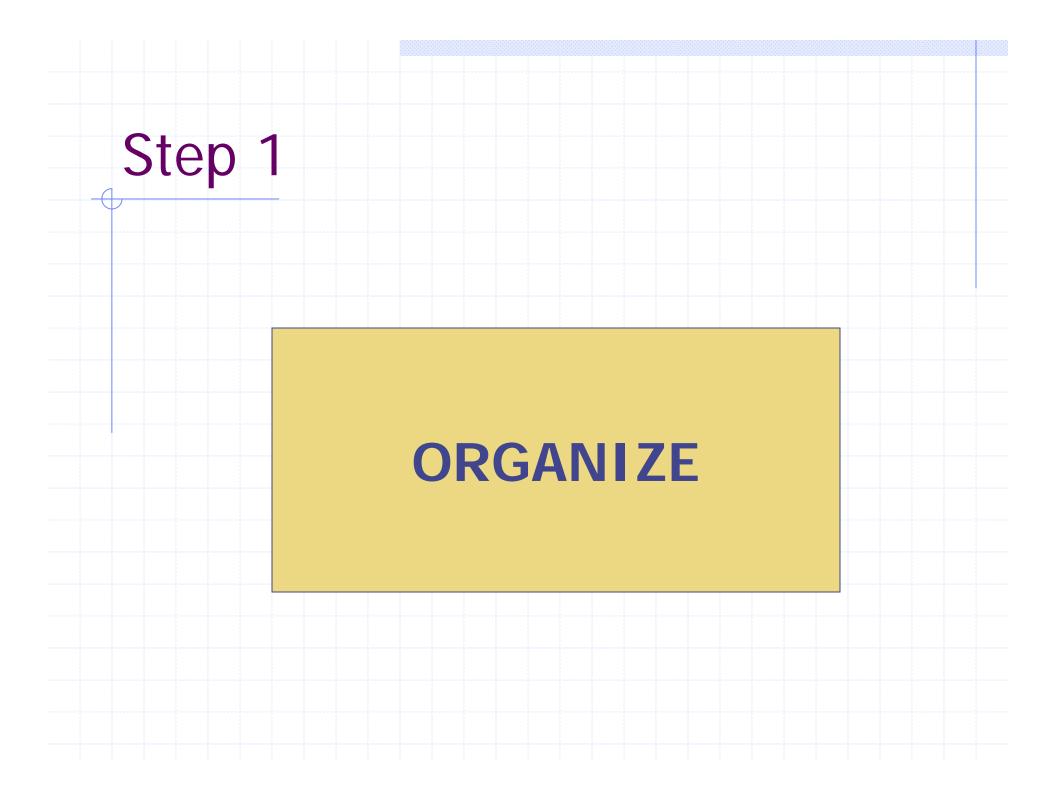
*perceived* threat to something of personal value (e.g., life, property) to Baxter's key stakeholders. A risk has both the potential to generate negative publicity and to result in lost business and/or a wholesale loss of confidence in the company's preeminence among target audiences. Although a risk is *perceived* as real, the *consequences* are real and as such, must be addressed.

actual and critical event that causes Baxter's stakeholders and/or others to lose trust and confidence in Baxter. In a crisis situation, the consequences to Baxter are widely known within and outside the company. A crisis consumes a significant amount of time and resources, generates widespread negative publicity and potentially results in lost business.



#### **Team requirements**

- □ *Identify* a single decision maker
- Define roles and responsibilities clearly
- Coordinate through regular team meetings
- Share information readily and frequently
- Operate in a manner consistent with Baxter's shared values and policies

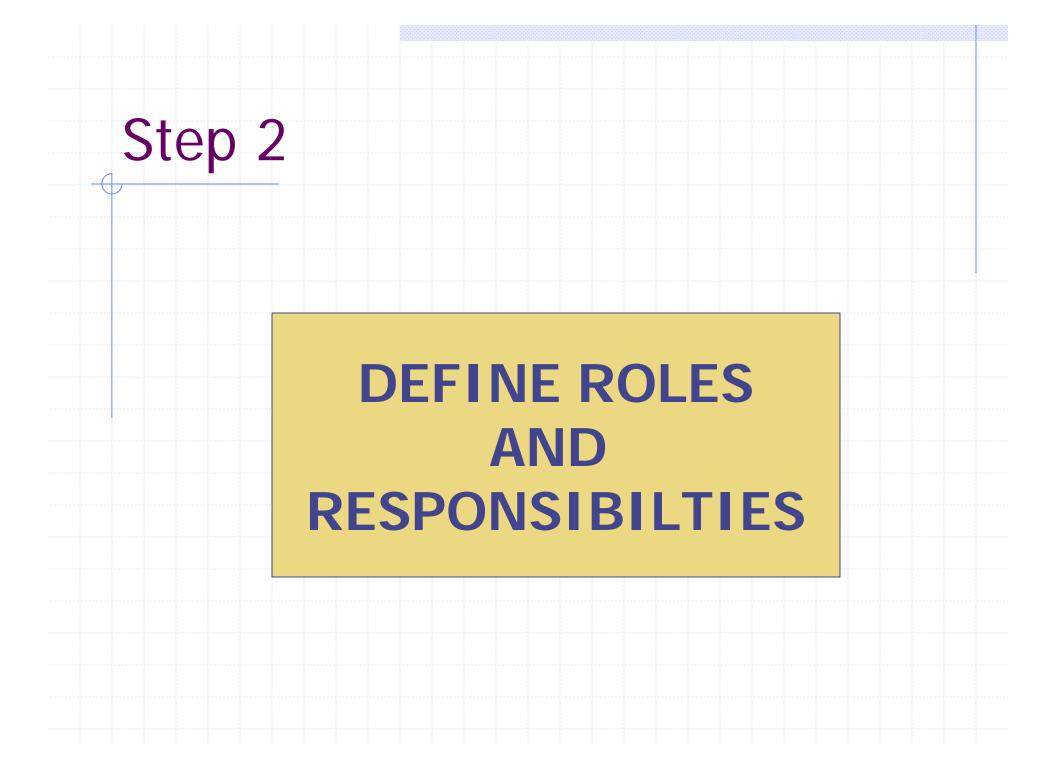


# **Global Team Membership**

- 22 Members 11 are Vice Presidents
- **Representation from:** 
  - Health
  - Safety
  - HR
  - Security
  - **Expatriate Support**
  - Communications
    - North America Purchasing/supply chain
  - Customer Service

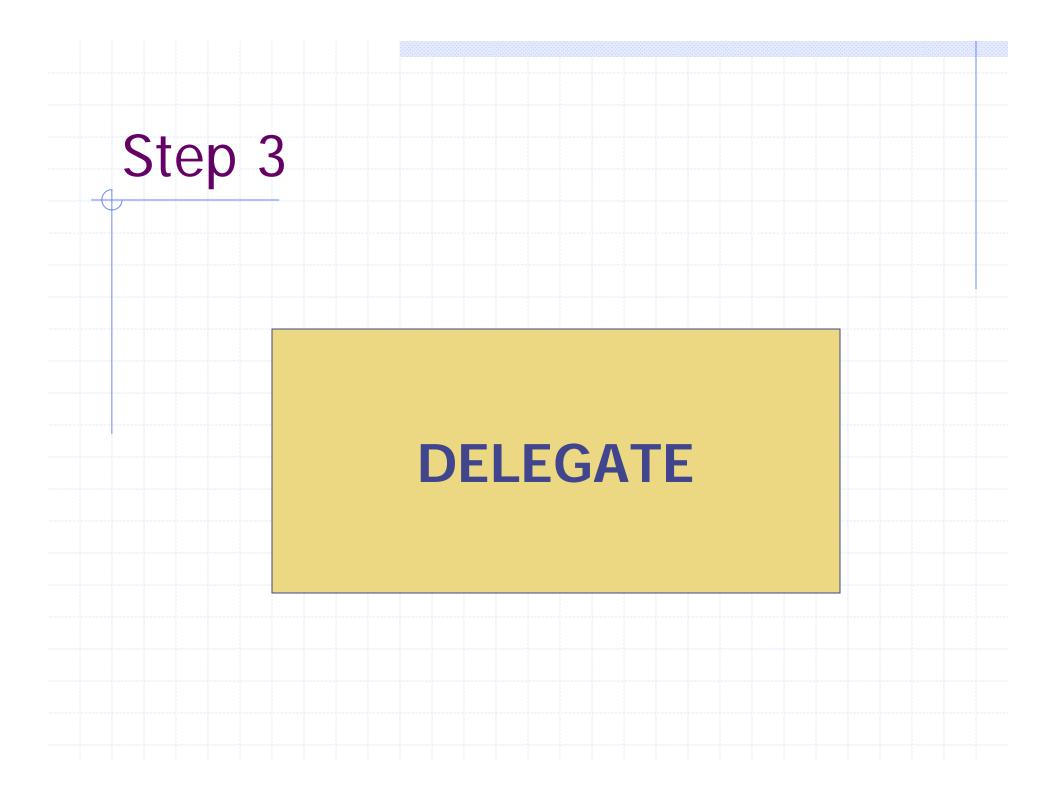
- Government Affairs
- Manufacturing
- Europe

- Asia/Pacific
- Latin America
- - Canada



#### Team Responsibilities Clearly Defined

GLOBAL TMT	REGIONAL TMT	COUNTRY/FACILITY TMT	BUSINESS TMT
Facilitate communications and sharing of information among teams, with executive management, and broadly across global employee population and stakeholders	Serve as an important information source to the global team and cascade information throughout region (to country and facility teams for communication to employees)	Serve as the primary information source for employees and key stakeholders within the country and Baxter facilities Feed country- and facility- specific information to regional team	Assess business risks and opportunities posed by potential pandemic and develop business-specific plans and strategies (focused on supply chain, manufacturing operations and sales/marketing)
Establish policy requiring regions, businesses and facilities to develop preparedness plans; provide guidance to the teams as they develop plans	Develop regional plans and ensure that individual country and facility plans are developed	Develop country and facility plans for pandemic preparedness and business continuation	Provide technical and business support to Global TMT
Ensure clear accountability for decision-making and mediate any conflicting decisions made by regional or business teams	Coordinate efforts within region	Coordinate efforts within country or facilities	Coordinate efforts within global business, in collaboration with Global TMT and regional TMTs
Benchmark with other corporations and government agencies to ensure appropriate		Identify and understand government preparedness plans and develop contingency plans	
preparedness plans and gain insights into additional measures		Sample page fro Scope of Res	



# Threat Management Teams (TMTs) at the following levels

Global
 Regional
 Country/facility

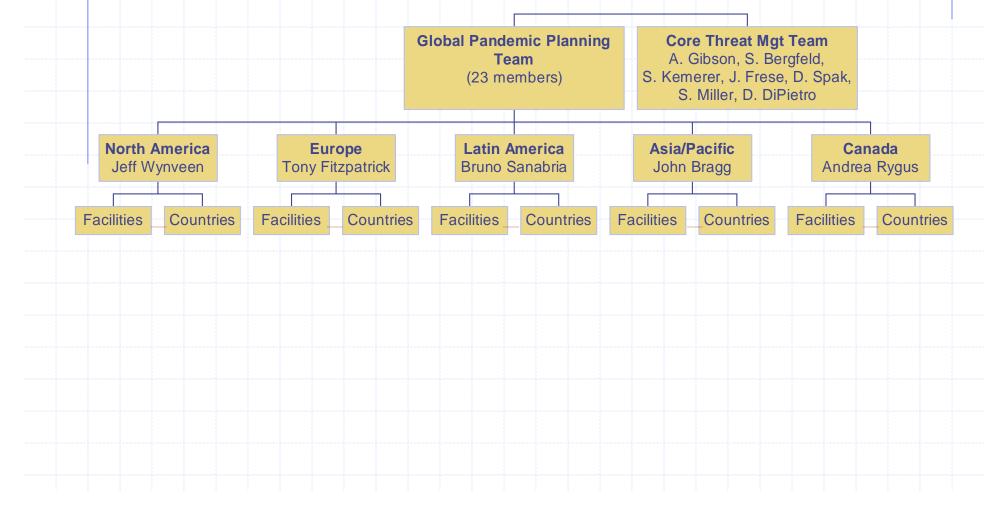
Business

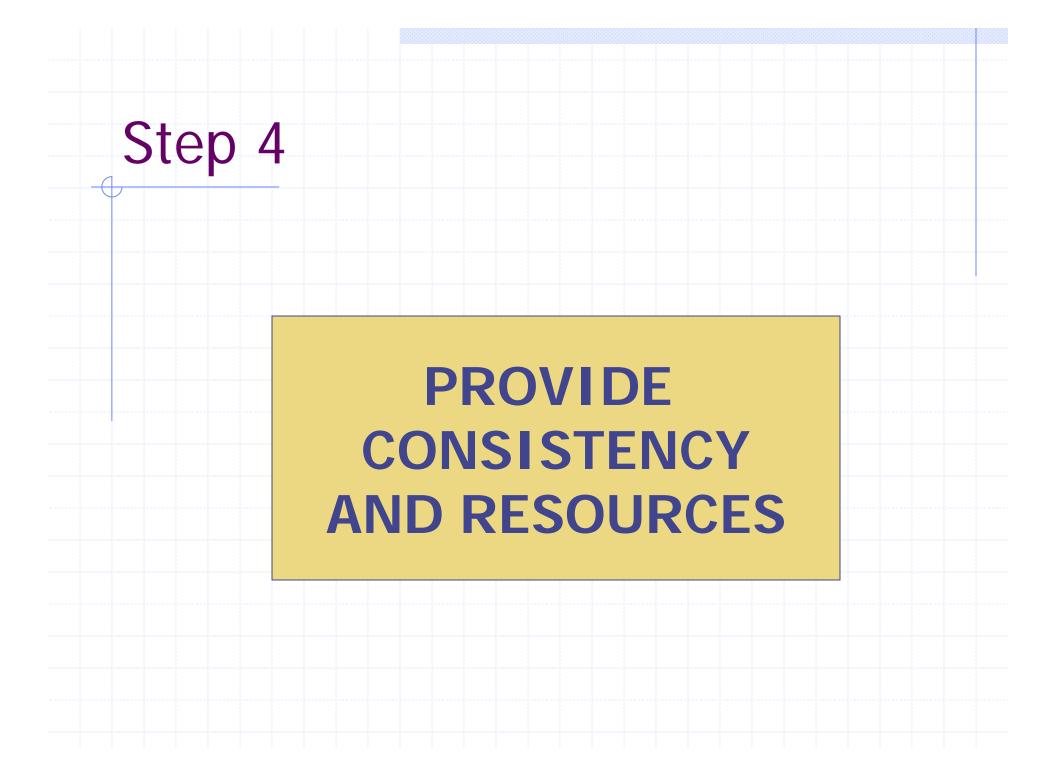
"The only thing more difficult than planning would be explaining why you did not do it!" Marja Esveld

Healthcare Inspectorate, The Netherlands

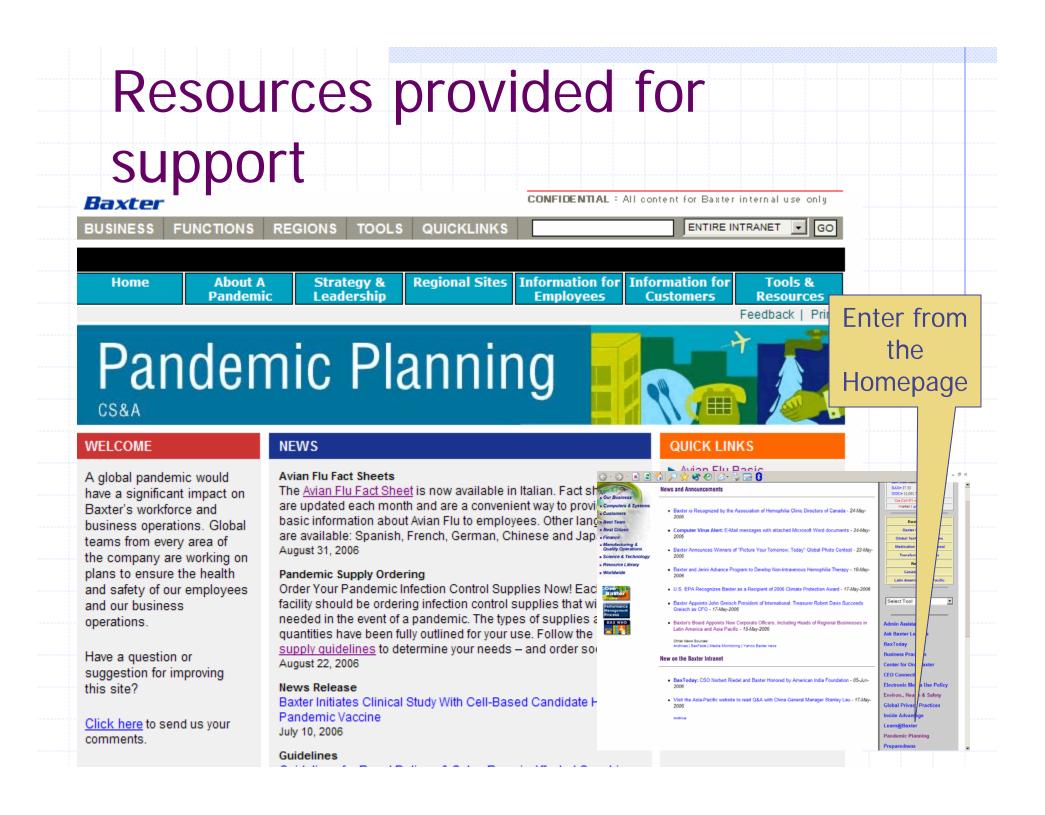
### Threat Management and Pandemic Planning Team Structure

#### **Pandemic Planning Structure**





Name of Facility:			Required Field				
on Completing Form			Number of Items Completed	0			
Date			Required Field				
Date							
		Kefer to t	Barter's Avian Flu Website for reso	urces and guideline misfindex.html	···		
RESPONSIBILITY	No.	TASKS	GUIDELINES	COMPLETE D Yes = 1 No = 0	NOTES		
PLANNING Develop country and facility plans for pandemic preparedness	1	Form facility proparodnoss to am	Facilities should farm a Eurinees Continuity team mode up of different members of the facility functions. Particularly there in the responsibility section of this checklist. It is recommended the facility starts with the	0			
	2	Coordinate facility plans with the buriness or function responsible for your operation	Review the "Scape of Responsibility" document for pendemics. Establish communication links with appropriate huriness contacts within Seater.	0			
	3	Coordinate plans with Regional/Divisional TMTs	Ertahlish communication link with seqional therat management coordinator. Communicate facility planningstaturon a sequlas haris.	0			
	4	ldontify rituations or ovents that would trigger buriness interruption	I seculty burness continuity train to identify potential incidents that may create a burness interruption. Work with the Country level or genization to help identify incidents. This could include you demic as well as non- pondemicrituations (e.g., not we did actes,	0			
	5	Arsure that local health authorities understand the nature of Baxter's products and their critical role in pandemic response	Most with local government officials to discuss the importance of Easter's products to a pandomic. Notional court octrachould be courdinated through the country manager.	0			
COMMUNICATIO N Serve as the primary	6	Communicato now and oxirting policies rolatod to the pandomic	Communicate information periodically, ar deemed relevant and appropriate to employeer. See the Baxter pandemic preparednerr uebrite.	0			
information source for employees and key stakeholders within the country and Baxter	7	Ertablish communication channels to reach all employees at home		0			
facilities; feed country- and facility-specific information to regional	8	Provide information on pandomicstatur, recommendations and company plans to all	<u>Communicate Baxter's condemic clannina</u> stratear and resources available to employees.	0			
team	9	emplayeer Conduct Q&Asersions for all associates to address their concerns	This could be done in employee discussion asoure, or on a facility website.	0			
	10	Ertablish vaico mail mossaqinqsystom ta accoss and colloct critical information	Set up a muse aqinqeysetem taqeravide far avtqainq muse aque and incaminq questiane.	0			
OUTREACH	11	Obtain local qovornmont pandomic plan	Eechriterhouldh our o copy of the relevant gouernment plan, if available.	0	Checklists for		
Identify and understand government preparedness plans and	12	Evaluato plan ar it rolator to the facility	Work with the Country Manager/Director and other facilities in your country to energy that	0			
develop contingency Plans accordingly	13	Ertablish current contact and obtain local plans from appropriate health authorities	Facility plans reflect contingencies for various Direase with local community and local emergency services to ensure that appropriate	0	consistency		



# Resources on the Baxter Pandemic Website today

	out A Strategy & Regional Sites Information for Information for T	ools &
tome > About	Avian Flu Fact Sheets and Information	Fact sheet available in 9 languages –
About A Pandemic	These one-page Fact Sheets provide basic information about Avian Flu. They are up beginning of each month with statistics from the World Health Organization (WHC	updated monthly
Avian Flu wan Flu Fact Sheets and Information News & Nonouncement Archive Timeline of Avian Flu External Links	<ul> <li>Avian Flu Fact Sheet - <u>Chinese</u> (last update January 1, 2007)</li> <li>Avian Flu Fact Sheet - <u>Czech</u> (last update January 1, 2007)</li> <li>Avian Flu Fact Sheet - <u>English</u> (last update January 1, 2007)</li> <li>Avian Flu Fact Sheet - <u>French</u> (last update January 1, 2007)</li> <li>Avian Flu Fact Sheet - <u>German</u> (last update January 1, 2007)</li> <li>Avian Flu Fact Sheet - <u>Italian</u> (last update January 1, 2007)</li> <li>Avian Flu Fact Sheet - <u>Japanese</u> (last update January 1, 2007)</li> </ul>	Presentation for employees
	<ul> <li>Avian Flu Fact Sheet - <u>Portuguese</u> (last update January 1, 2007)</li> <li>Avian Flu Fact Sheet - <u>Spanish</u> (last update January 1, 2007)</li> </ul>	

# **Avian Flu Fact Sheet**



#### **Avian Flu Fact Sheet**

Last updated: January 1, 2007

#### Definition:

Intectious bird disease caused by type A strains of the influenza virus. Current strain is subtype H5N1. Occurs worldwide. Strain prone to mutation that can be rapid. Virus strain initially identified in the 1950s. Humans lack natural immunity.

#### Spread:

Current strain spreading through migratory birds at a rate of 30-to-50 Km per day. Human infections have occurred through direct, close contact with poultry. Humans infected through the following routes: oral/fecal, ingestion (drinking raw duck blood), and possibly inhalation. Although some have been suspected, no cases of human-to-human transmission have been confirmed.

#### Mortality

As of January 1, 2007, 261 human cases with 157 deaths = 60.2% mortality rate.

#### Risks:

If and when the virus develops the ability to be transmitted from human to human, spread is likely to occur rapidly and on a global basis, resulting in a pandemic. This can occur through two basic mechanisms:

- Antigenic drift: Through mutation, virus becomes capable of infecting humans from a human source
- Antigenic shift (reassortment): Intermediate host (for example, human or pig) can harbor two influenzas simultaneously, resulting in a new virus type with characteristics of both. This would result in a type of virus that could spread effectively and against which humans would have little or no mmunity.

Affected Countries (Human Cases): Azerbaijan (8), Cambodia (8), China (21), Djbouti (1), Egypt (18), Indonesia (74), Iraq (3) Thailand (25) Turkey (12), and Vietnam (93)

#### Prevention and Treatment:

- Prevention: Vaccine in initial stages of development, 2 million doses produced but dosage not determined and effectiveness for younger and older populations not yet determined. All doses in the hands of government bodies.
- I reatment l'amitiu (and Kelenza) can be effective for limited prevention and treatment of symptoms. Tamiflu's superior in terms of ease of administration and population effectiveness. Limited availability and should only be used for individuals actively at risk. Course of treatment must begin 6 to 48 hours from onset of symptoms to be effective.

#### Control Measures:

- Heat: Virus killed by heat (56 degrees C for 3 ho
- Common disinfectants: Formalin and jodine-based
- Infection control measures: Frequent hand wa

#### poultry products

#### History:

- Previous pandemics:
- 1918-1919 more than 40 million deaths worldv
  - 1957-58 more than 1 million deaths
  - 1968-69 more than 1 million deaths
- By comparison:
- Death toll from SARS -- 800

#### Symptoms of Avian Influenza in Humans:

Reported to range from typical influenza-like symptoms (e.g., fever, cough, sore throat and muscle aches to even infections (conjunctivitis), preumonia, asute respiratory distress, viral pneumonia, and other seven

#### **Basic information** on one page

# Strategy & Leadership Information

	1	4				
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				<u> </u>		

Home		Strategy & Leadership	Regional Sites	Information for Customers	
Home > Strategy L	eadership				Feedback   Print



#### Strategy & Leadership

Baxter is taking a "threat management" approach to assuring our company's ability to do business in the event of a pandemic. A threat is any event or situation with potential adverse impact on

- The health and safety of the public or the Baxter team
- Our ability to do business or
- Our reputation

A pandemic could be a threat in any of these categories. Therefore, Baxter has organized teams at the global, regional / country, facility, and business levels that are evaluating the potential impact of a pandemic and the best way to minimize any adverse effects on our staff and our business.

Scope of Responsibility

Pandemic Toolbox

Staged Approach to

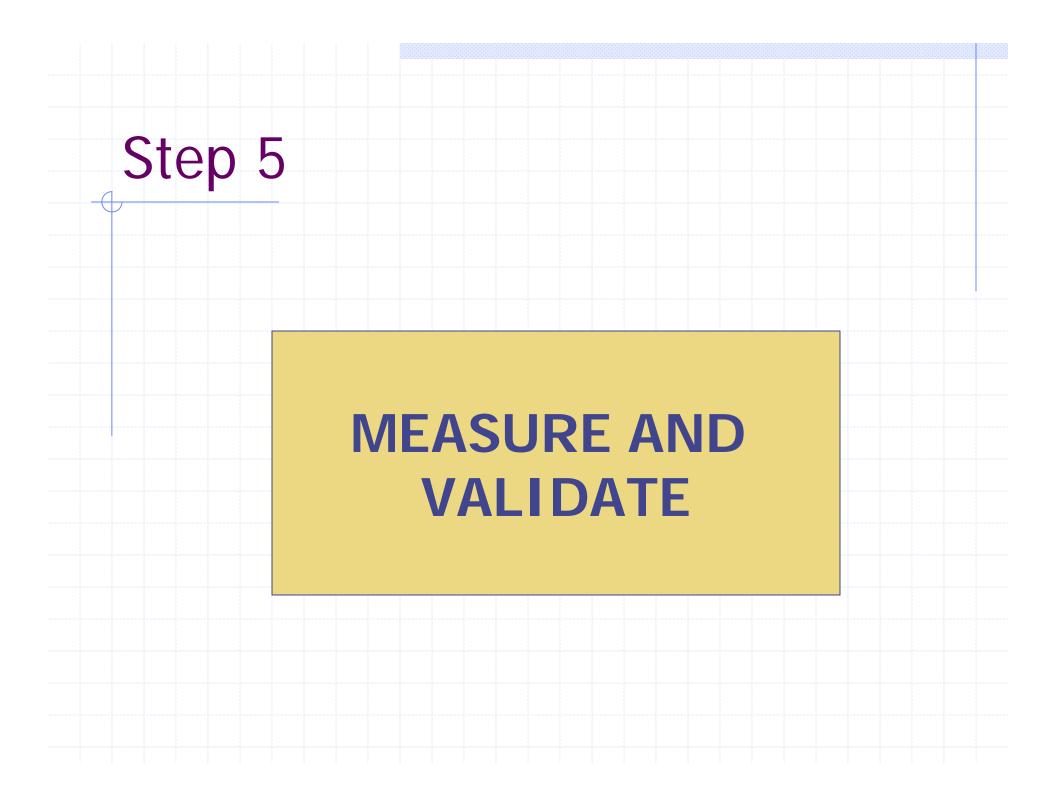
Activities

Global Team Roster

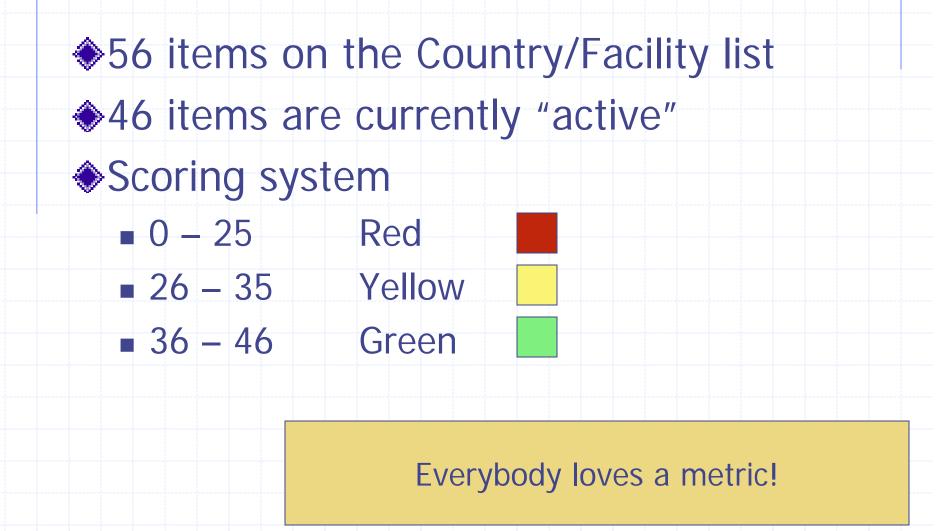
Preparing well for a possible pandemic will also be excellent could challenge Baxter.

expanding toolbox to help with planning

Strategy & Leadership







### Scores tracked

Facility	Type of Facility	Pandemic Readiness Score	Pandemic Readiness Score	% Complete		2006 Headcount		
ASIA PACIFIC								
	0	0		0		204		
	0	23		50		105	RED = 0 to 25	
	w	38		83		121		
	M	38		83		71	YELLOW = 26 to 35	
	M	39		85		347		
Facilities listed by region	M	39		85		287	GREEN = 36 to 46	
	M	39		85		139		
	M	40		87		205		
	M	40		87		104		
	M	40		87		360		
	M	43		93			M = Manufacturing	
	M	44		96 96		563	R&D = Research & Developmen	
	M	44 46		100		1686 115	W = Warehouse O = Office	
	M	46		100		449	0 = Office	
		37.26666667		Total Green:	13	5001		
	_ L	51.20000001	l	Total Sites:	15	3001		
				Total Sites.		J , , , , , ,		

## And Reported & Trended

#### Country/Facility Tracking

Last Updated 7/18/06

Region	Number Reporting	Number of Sites	% Reporting	Average Score	Number Green
Asia/Pacific	12	15	80%	29.93	8
Europe	32	35	91%	16.23	3
Latin America	6	10	60%	10.5	2
North America	20	33	61%	9.35	0
Totals	70	94	74%	13.74	13

#### Last Updated 10/25/06

Region	Number	Number of Sites	% Reporting	Average	Number	% Green
	Reporting			Score	Green	
Asia/Pacific	15	15	100%	40.8	14	93%
Europe	34	34	100%	39.1	34	100%
Latin America	10	10	100%	41.2	10	100%
North America	34	34	100%	32.7	22	65%
Totals	93	93	100%	37.3	80	86%

#### Last Updated 01/18/07

Region	Number	Number of Sites	% Reporting	Average	Number	% Green
	Reporting			Score	Green	
Asia/Pacific	16	16	100%	41.375	15	94%
Europe	34	34	100%	40.2	34	100%
Latin America	10	10	100%	41.6	10	100%
North America	34	34	100%	38.6	32	94%
Totals	94	94	100%	39.97	91	97%

### And one final quote...

I think of it as the earthquake in San Francisco. You know it's on the fault. You know it's going to occur, but you can't tell if it's going to occur this year or next year or the year after. But it's clearly going to happen and the only way you can prepare is to build your houses with structure."

> Dr. Roger Glass Director, Fogarty Intl Center US National Institutes of Health

### **Comments & Questions**

