Public Health Crisis Preparedness and Response

TABLE-TOP EXERCISE AGAINST THREATS FROM EMERGING INFECTIOUS DISEASE
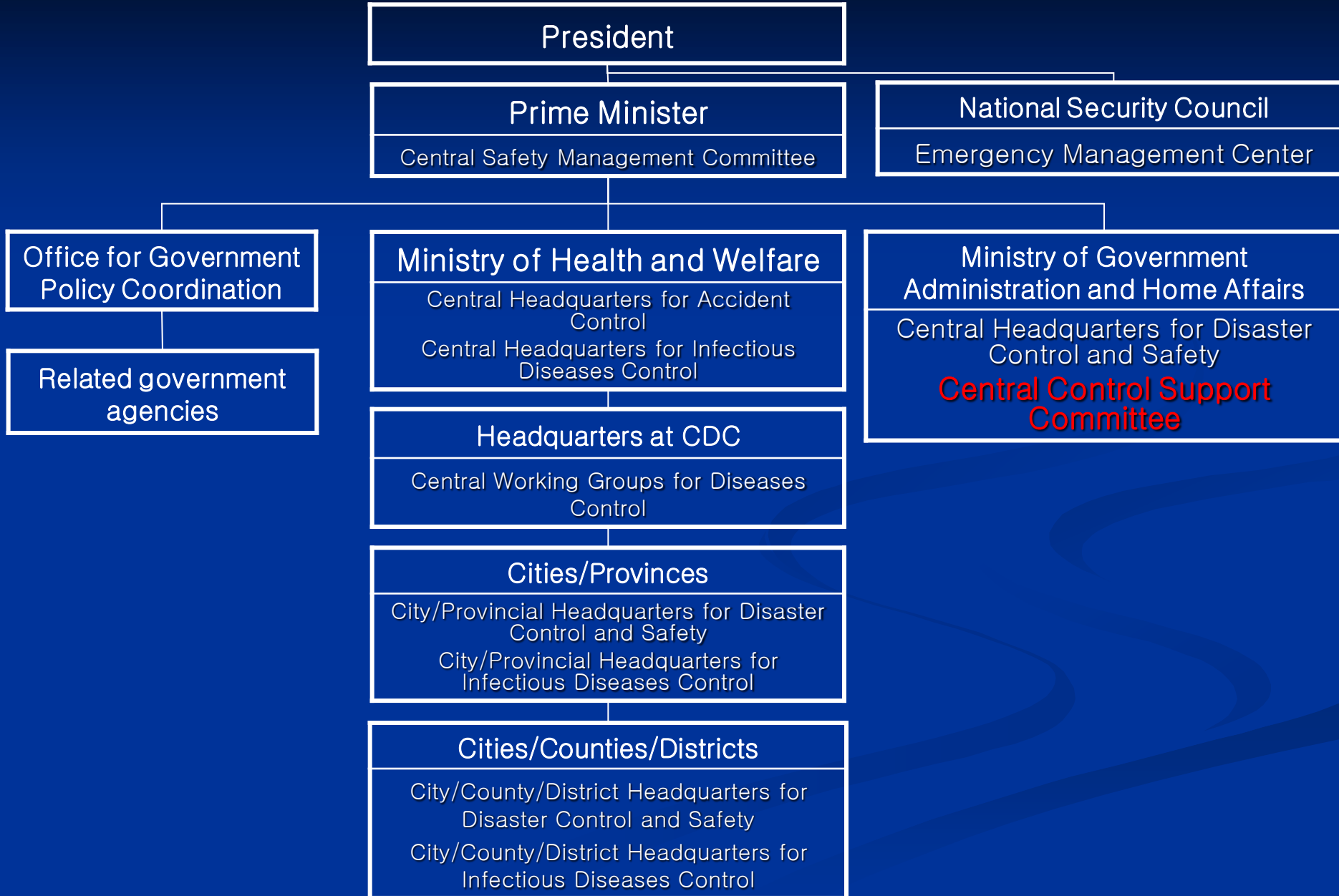
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Objectives of the exercise

- Find types and amount of resources needed at the time of emergency

- Develop optimal strategies for decision makers to utilize existing limited medical resources to minimize the threats

- Pull out appropriate manual to follow in the public health emergency from the exercise experiences

Korean National Disaster Control System

Central Control Support Committee(1)

Organization	Functions
National Security Council	• Planning and coordination for the establishment of control system for emerging infectious diseases • Planning and coordination for the establishment and application of the national emergency warning system
Office for Government Policy Coordination	• Management of the Central Safety Control Committee • Establishment and coordination of a cooperative system among various government agencies
Ministry of Planning and Budget	• Timely budget support for emerging infectious diseases control
Government Information Agency	• Coordination of publicity within the country
Ministry of Education & Human Resources Development	• Health management in schools • Temporary closure of schools

Participants(150 people)

- officials from 16 cities and provinces, public health centers and KCDC
  - 16 cities and provinces were divided into 4 regional teams
- central governmental officials from 14 agencies including NSC
- health experts from 3 medical institutions, 5 civil groups such as Korean Medical Association
- Politics & Military game experts from Korea Institute for Defense Analyses (KIDA)
- Professor of Korea University Medical College
- Observers from WHO and MHWL, Japan

Participating Organizations

- National Security Council Secretariat
- The Office for Government Policy Coordination
- Ministry of Planning and Budget
- Government Information Agency
- Ministry of National Defense
- Ministry of Government Administration and Home Affairs
- Ministry of Agriculture and Forestry
- Ministry of Health and Welfare
- Ministry of Labor
- National Intelligence Service
- National Police Agency
- National Emergency Management Agency

- The Armed Forces Medical Command
- National Veterinary Research and Quarantine Service

- National Medical Center
- Seoul Medical Center
- Inchon Medical Center

- Korean Medical Association
- Korean Hospital Association
- The Korean Society of Infectious Disease
- The Korean Pediatric Society
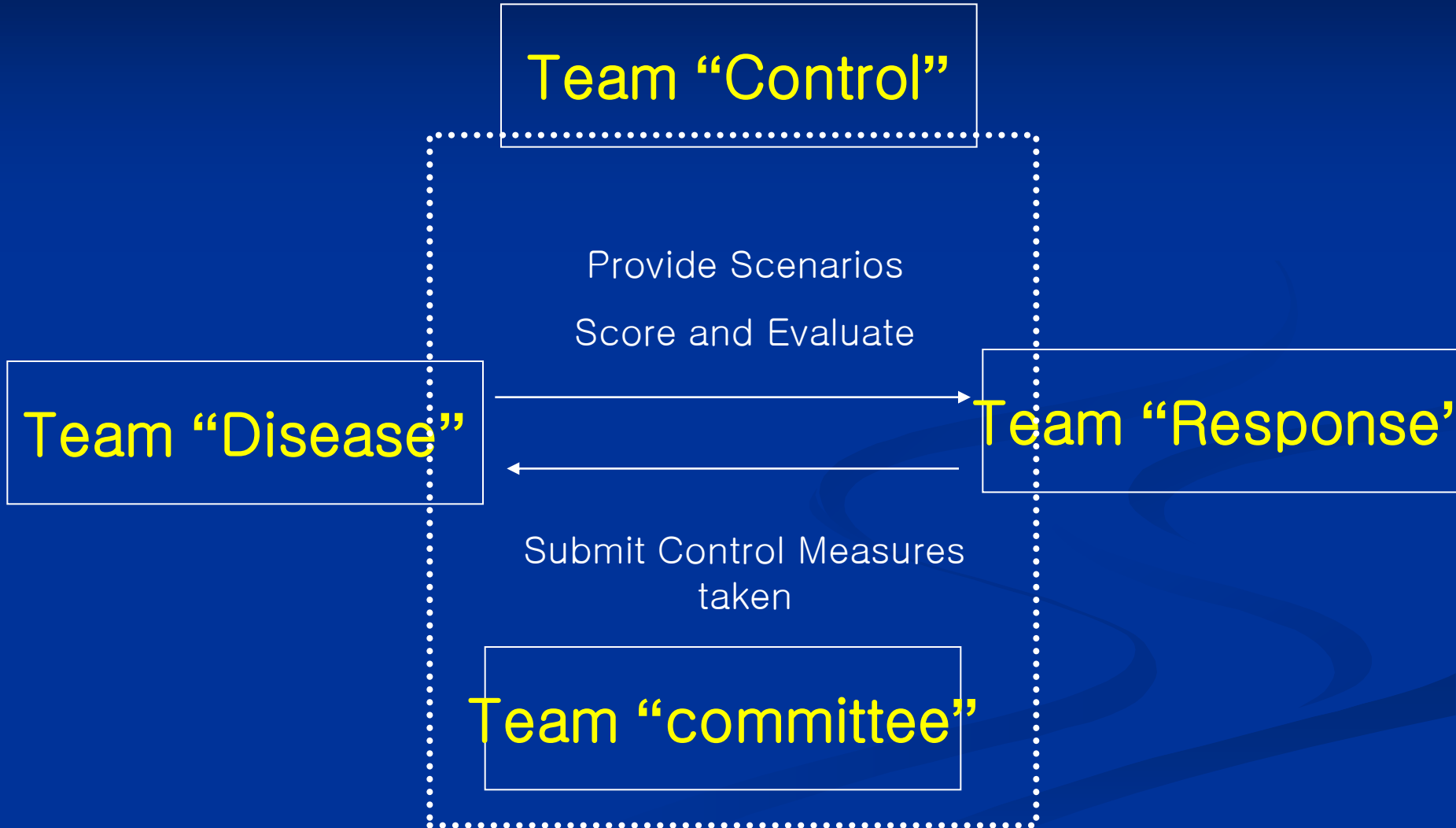- The Korean Society for Pediatric Medicine

Introduction

Numbers of cases

Scenarios

Resource Study

Recognize the Limitation

Simulation

- Parameters
- Disease nature
- Country factors

Set Simulation

Phase 1–4

Epidemiologic Tree

Previous Experience

Traffic, geographic..

Score & evaluation

Interactively

Prepare a Strategic Plan how to solve it NOW

Develop a Manual updated
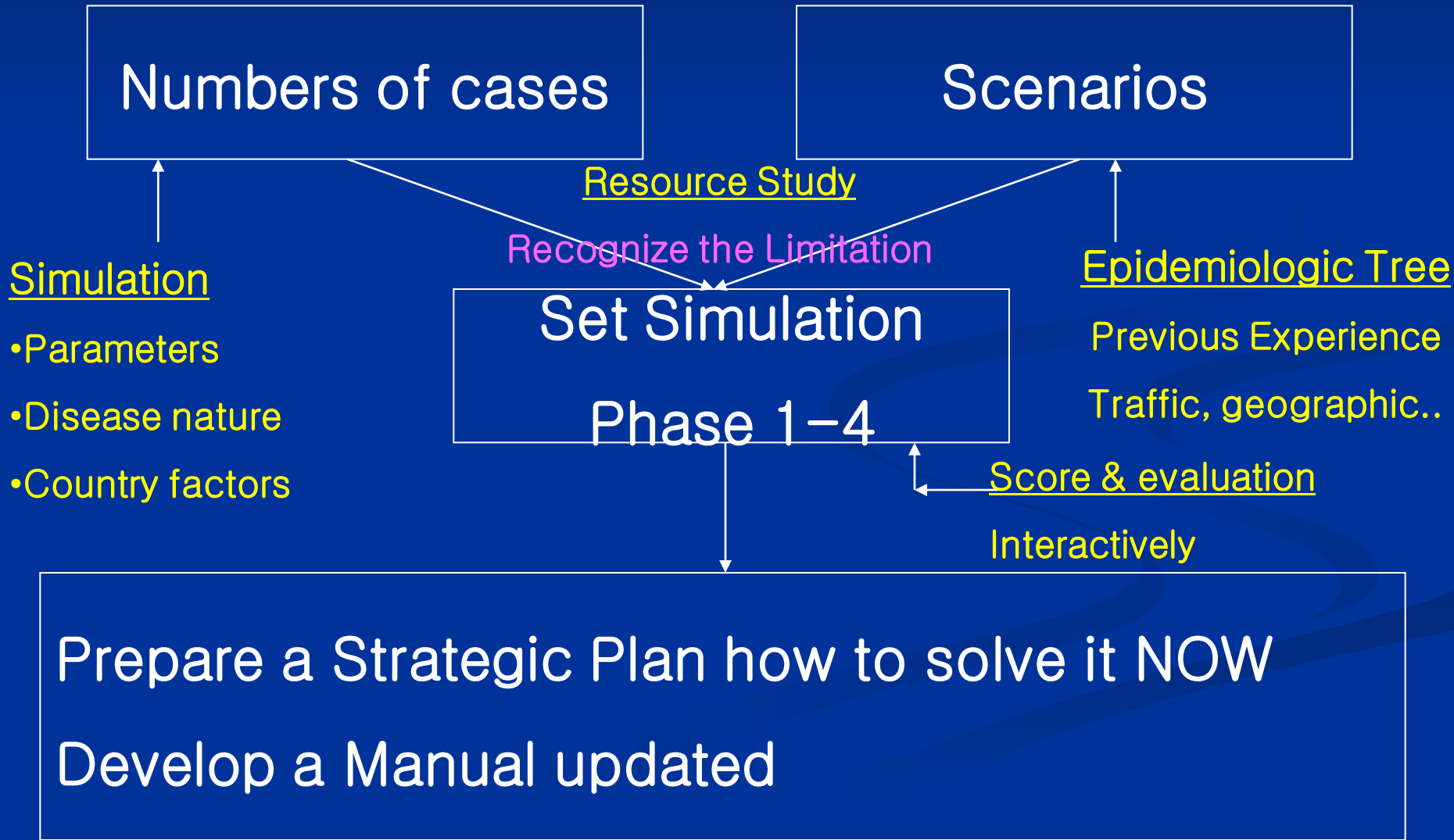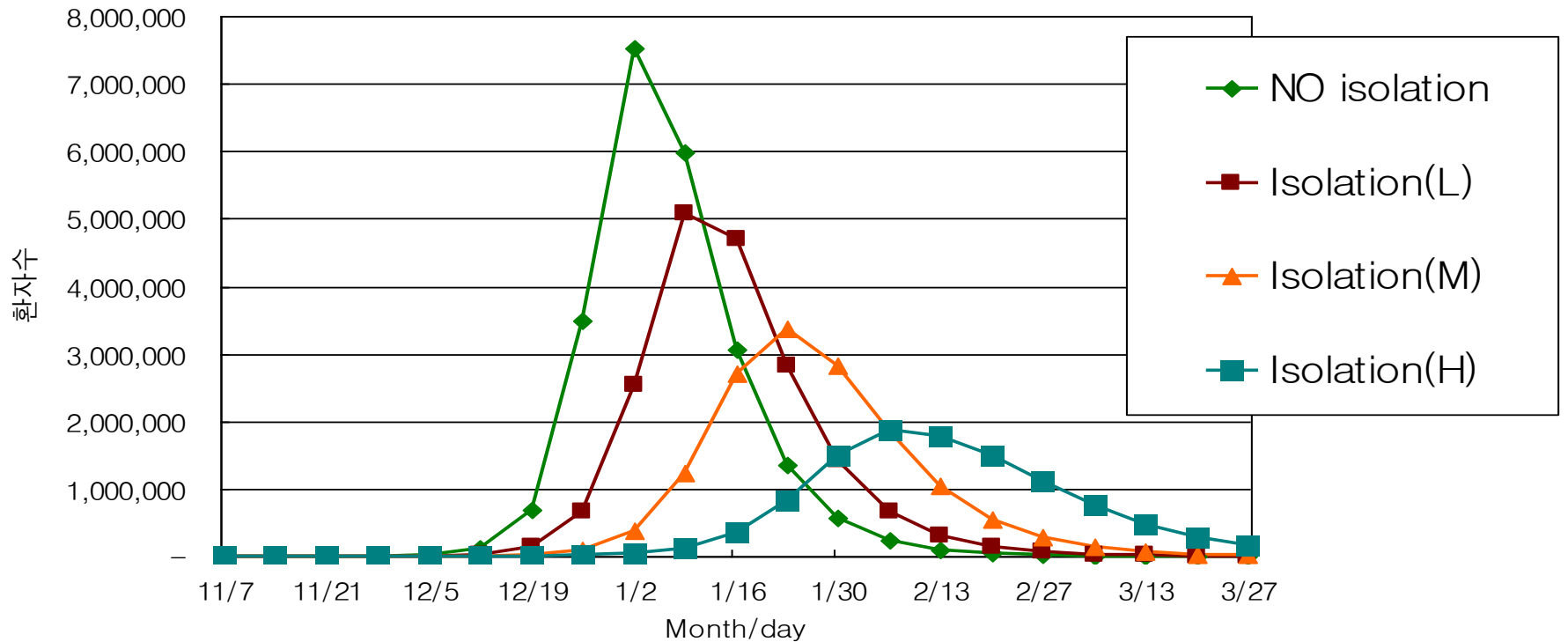
Projected number of cases
in Capital area by Model maker

Phase of EID Pandemic

Phase I Suspected Patients is discovered	Phase II Outbreak in some region	Phase III Outbreak in the whole country	Phase IV
Public Health **Give the warning** ■Enhance quarantine & surveillance ■Research into the track of the epidemic ■Secure the isolation facilities ■Prepare a plan to secure additional medical resources ■Send a manpower to help quarantine	**Give the alarm** ■Prevent the diffusion within the region ■Enhance watch over the epidemic ■Quarantine the patients in groups ■Secure isolation facilities and manpower in quarantine station ■Prevent the infection within medical centers ■Secure resources and distribute them appropriately	**Mobilize the medical Personnel** ■Issue a mobilization order for healthcare manpower ■Secure isolation facilities for quarantine ■Use local medical centers as a base hospitals ■Seek the military force's help to get medical manpower and medical centers	**Declare emergency state** ■Secure alternative medical manpower and facilities ■Call the military medical manpower and the military medical facility
General Administration ■Run the Central Countermeasure Committee ■Close schools in the contagious region ■Enhance management in vulnerable areas	■Control the traffic and close schools in the regions ■Prohibit any events and gatherings ■Broadcast emergency breaking news	■Control the traffic and close schools on a nationwide scale ■Strengthen the public security and safety net ■Provide the necessities of life	■Marshall Law

Objective of response

Prevent the influx the disease into the country	Prevent the nationwide spread of the disease	Minimize the numbers of patents and death	Early rehabilitation of the basis of public healthcare

Supporting technologies

- **Pre-made news coverage**(video clips of TV breaking news and a newspaper)
- **Web software to exchange documents** (*Smart E-mails*)
- **Web page** for the exercise communication
  - **Computerized program** for risk management exercise
  - Automated counting of medical resources use
- **Video Conference and Conference Call**
  - Web-based Live-broadcast of the exercise
  - Connects Central Countermeasure Committee, 16 provinces and other relevant agencies
- **Web-based cell phone communication system**
  - To send public health emergency messages, orders and instructions

Development of exercise guidelines

신종전염병 위기관리 훈련지침
- 대응팀 -

2006 3

보건복지부
질병관리본부

병 위기관리 훈련지침
- 바이러스팀 · 통제팀 -

질병팀

보건복지부
질병관리본부

전염병 위기관리 훈련지침
- 참관인 -

보건복지부
질병관리본부

Exercise progress

④Submission of evaluation
report on the response plans

Central
Countermeasures
Committee

Disease team

⑤Instruction
Of latter-stage
countermeasures

Central Control
Support Committee

① Presentation of
offense message

③ Delivery of
response plans

Control team

Central Working Group

① Delivery of offense message

③ Submission of response plans

Response team

Advisory Committee

⑤ Delivery of latter-stage
response plans

Response table
Patients Management

	MAIN	중앙방역대책 추진실무단	대 응 팀	질 병 팀	Display

환자에 대한 조치 | 의료시설 확보 | 접촉자 및 의료인에 대한 조치 | 의료자원 소모

대응팀 - 환자에 대한 조치 -

날자 : 2006 ▼ 년 1 ▼ 월 2 ▼ 일   지역 : 서울 ▼

가용일반병상:6484병상 , 가용중환자실:189병상 , 가용격리병실:775병상
가용대체의료시설:500병상 , 가용항바이러스제제:0인분

	대상자	추적관리	자택격리	일반병실입원	중환자실입원	의료기관격리	대체시설수용	항바이러스제제투여
환자	2937860	0	1175144	6484	189	0	830643	0
의심환자	1175144	0	1175144	0	0	0	0	0
추정환자	1028251	0	0	2484	60	0	100307	0
확진환자	734465	0	0	4000	129	0	730336	0

📋 수정 📋 삭제

Scenario of the next phase according to the score of the response

[the score of the response]   [Scenario of the next phase]

More than two
of the four region
got the score 'bad'

Scenario A

One of the four region
got the score 'bad'

Scenario B

None of the four region
got the score 'bad'

Scenario C

Major Issues of Discussion

- When and who should wear Personal protective equipment
- Time and method of distributing central stockpiles
  - Medical supplies, daily necessities
- Improving capacities of hospitals
- Alternatives to the lack of public health workers for infection control
  - KCDC, cities, provinces, counties, districts, 911 drivers
- Information Management
- Optimization of Decision-Making Channels
- Isolation
  - Who should be isolated and where?
- Restriction of transport and public gatherings

Lessons Learned

- **Need to develop risk management manuals**
  - Identify ways to secure and distribute medical resources and define roles of relevant agencies in the EID pandemics
- **Set priorities to secure and use adequate amount of medical resources**
  - What is the most cost-effective amount of medical stocks?
  - How can we obtain and store medical resources?
- **Reinforce relevant laws**
  - Legal grounds for implementing necessary measures (making decisions, mobilizing medical staff and resources) should be included in the *Communicable Disease Prevention Act*
  - Revision of IHR to effectively address emerging infectious diseases response based on reality
- **Establish infrastructure for initial response to outbreaks**
  - Rapid Response Team, isolation facilities and remobilization of medical equipment for caring for severe cases
- **Promote interagency collaboration and cooperation**

Epilogue

Core Success Factors

- Initial stage: CEOs should recognize its need and exert LEADERSHIP
  - Decision Making at Uncertain times
- Pre-exercise preparations: active involvement of managers at middle level
  - Is it absolutely necessary to conduct this exercise?
  - The existing guidelines are good enough-why do we need a new manual?
  - We are doing our best in securing necessary budget and orders by official documents will be enough if needed.
- Active participation and well-organized team
  - War game experts joined the event
  - Active participation of relevant agencies
    - Resolve interagency conflicts and develop skills to negotiate with the communities

Future plans

- 2006 exercise :28−30 June in Seoul
  - WPRO and APEC economy will be invited to the exercise and the international workshop (30 June)
- Objective of the exercise
  - Test the developed manual for crisis management of Pandemic
  - Test interactive decision making process under the public health emergency and uncertainty with resource limitation
- Extend participants from private sectors
- Implement field exercise at school and hospital
- Update manuals

Thank you