

Policy for hand-foot-mouth disease(HFMD) control and prevention in China

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Outline

- Epidemiology and control of HFMD
- Causes and effects
- Solution
- Stakeholder analysis
- Action plan to influence policy making
- Outcome if policy is adopted



Clinic feature and epidemiology of HFMD

➤ Clinic feature

- HFMD is a common childhood illness characterized by fever and vesicular eruptions on hands and feet and in the mouth

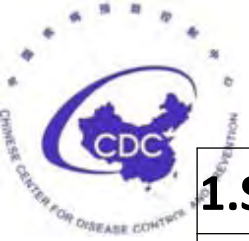
➤ Etiology

- Coxsackie virus (A5, A7, A9, A10, A16, B1, and B3), Enterovirus 71 and Other enteroviruses

➤ Epidemiology

- Most cases under 5 years old
- Most common in the summer and fall
- Fecal-oral and respiratory secretions spread





Current strategies of HFMD control in China

1. Surveillance and early warning

2. Early diagnosis and treatment

3. Control and prevention of HFMD

3.1 Education to people

3.2 Case management (Isolation and quarantine)

3.3 Disinfection of environment

3.4 Response to outbreak

3.5 Focus on important place and people (Childcare center, Hospital and health service, Scattered inhabiting children)

4. Capacity building

4.1 Training and supervise to health system and childcare center

4.2 Laboratory support

4.3 Financial support by government

5. Science research (vaccine develop)



Challenge to control HFMD

- Multiple models of transmission
 - I . Direct contact (Saliva, vesicular fluid, stool)
 - II . Indirect contact (fomite such as towel,cup,toy, surface of goods)
 - III. Droplet transmission(Respiratory secretion,saliva)
 - IV. Nosocomial infection
- High transmissibility
- 6%~53% of persons with EV71 infection are asymptomatic
- Virus may be found in throat of host for two weeks ,and in stool for one month after be infected

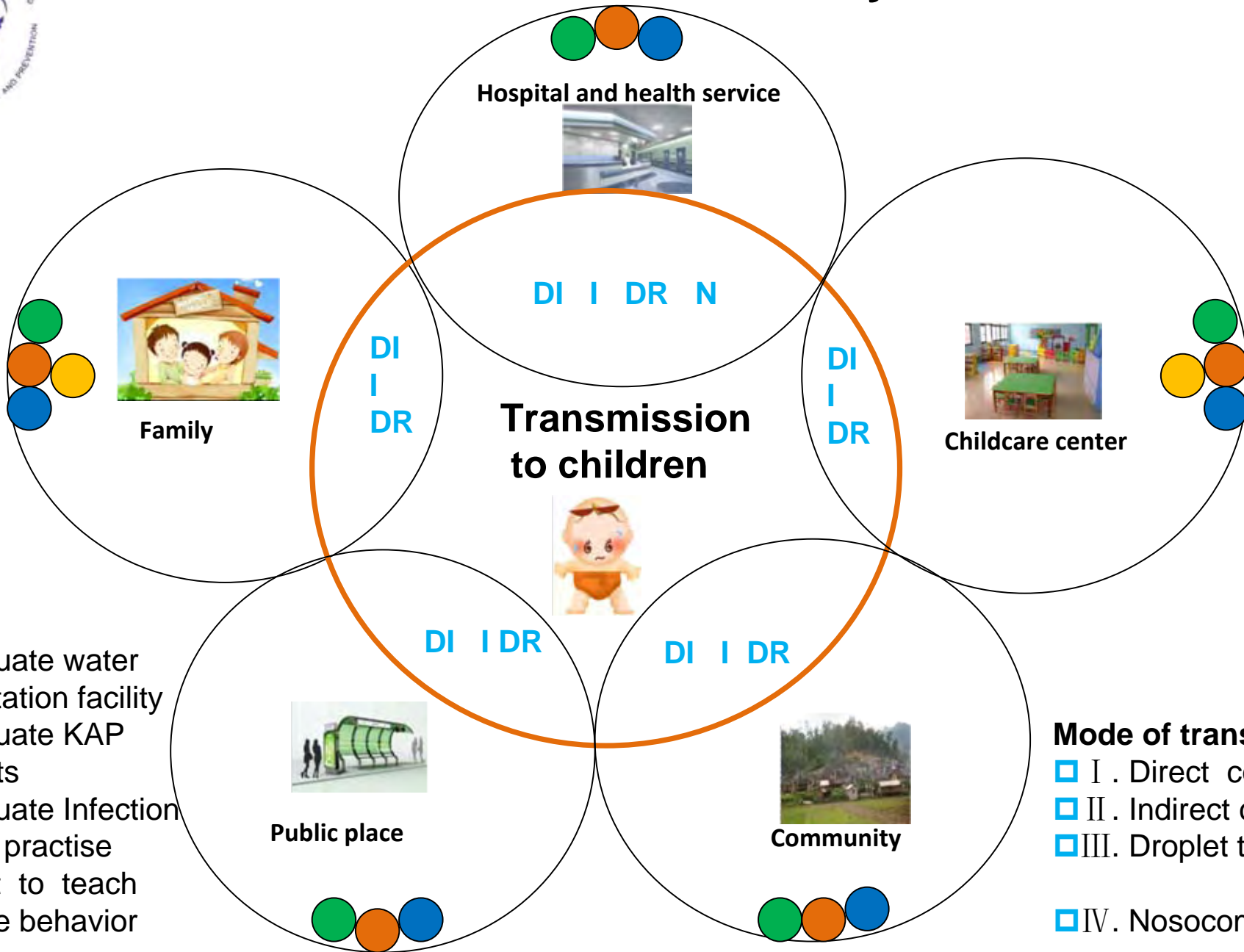


The problem?

- Why HFMD case number still increase after policy implemented?



Model of human be infected by enterovirus

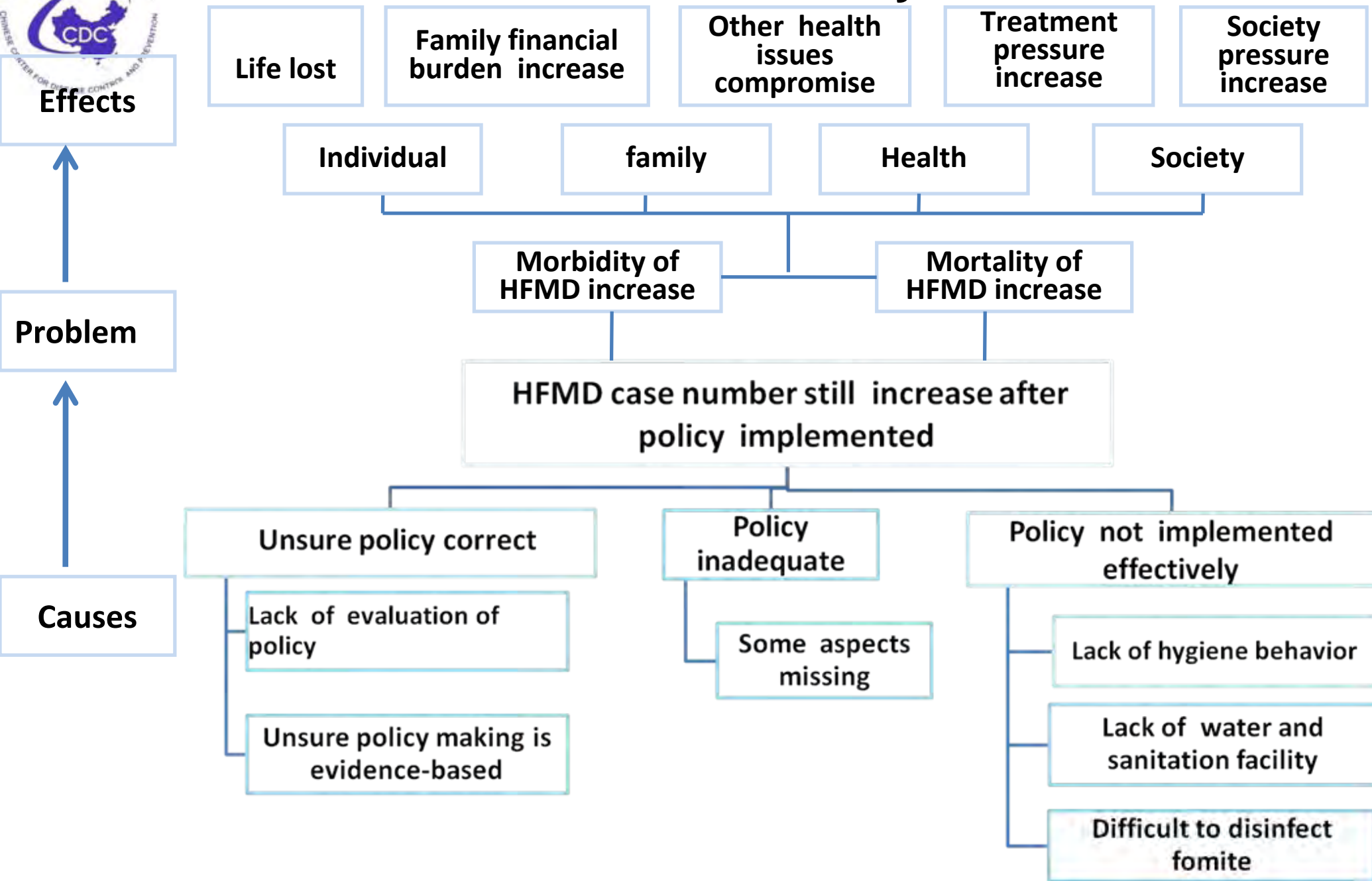


- Inadequate water and sanitation facility
- Inadequate KAP of adults
- Inadequate Infection control practise
- Difficult to teach hygiene behavior

- Mode of transmission**
- I . Direct contact (DI)
 - II . Indirect contact (I)
 - III. Droplet transmission (DR)
 - IV. Nosocomial infection (N)



Problem tree analysis





Analysis of current strategies of HFMD in China

Current strategy		Missing	Ideal strategy
1.Surveillance and early warning			Current strategy
2.Early diagnosis and treatment			
3.Control and prevention of HFMD	3.1 Education to people	Lack of evaluation to education effect	Current strategy + missing
	3.2 Case management (Isolation and quarantine)	Lack of evaluation of control effect	Current strategy + missing
	3.3 Disinfection of environment	Lack of evaluation of disinfection	
	3.4 Response to outbreak	Lack of evaluation of control effect	Current strategy + missing
	3.5 Focus on important place and people	Lack of evaluation to activities effect	Current strategy + missing
4.Capacity building	4.1 Training and supervise to health system and childcare center		
	4.2 Laboratory support		
	4.3 Financial support by government	Lack of support to sanitation facility	Current strategy + missing
5.Science research (vaccine develop)		Lack of risk factor study of personal and environment	Current strategy + missing



Short term Solution

➤ Purpose

- To reduce mortality and control outbreak of HFMD

➤ Activities

- Response to outbreak promptly and evaluation of effect
- Treatment promptly
- Education and training
 - Supervise and monitor to education and training
 - Evaluation of effect of KAP education and training
 - Increase accesses to obtain knowledge
 - Intensifying KAP education to children and their guardian
 - Strengthening training to doctor and teacher
- Proper environmental disinfection



Sustainable Solution

➤ Purpose

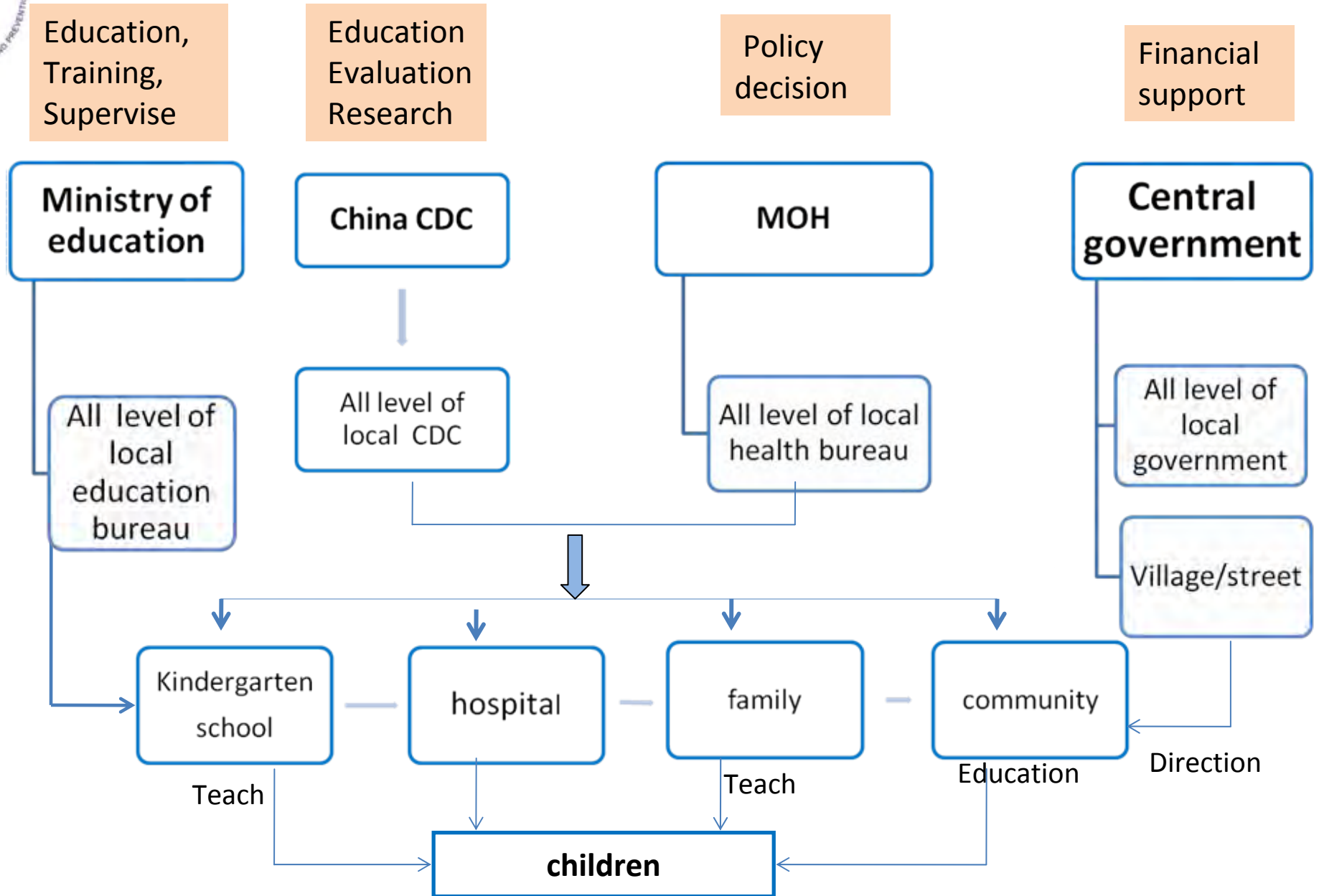
- To reduce morbidity of HFMD and other infectious disease through intensifying health knowledge education to people

➤ Activities

- Long term and regular KAP education for all people, focus on KAP education to children and their guardian, teacher and doctor
- To increase accesses to obtain knowledge
- To increase or reform water and sanitation facility in public place
- To increase sanitation facility by financial support

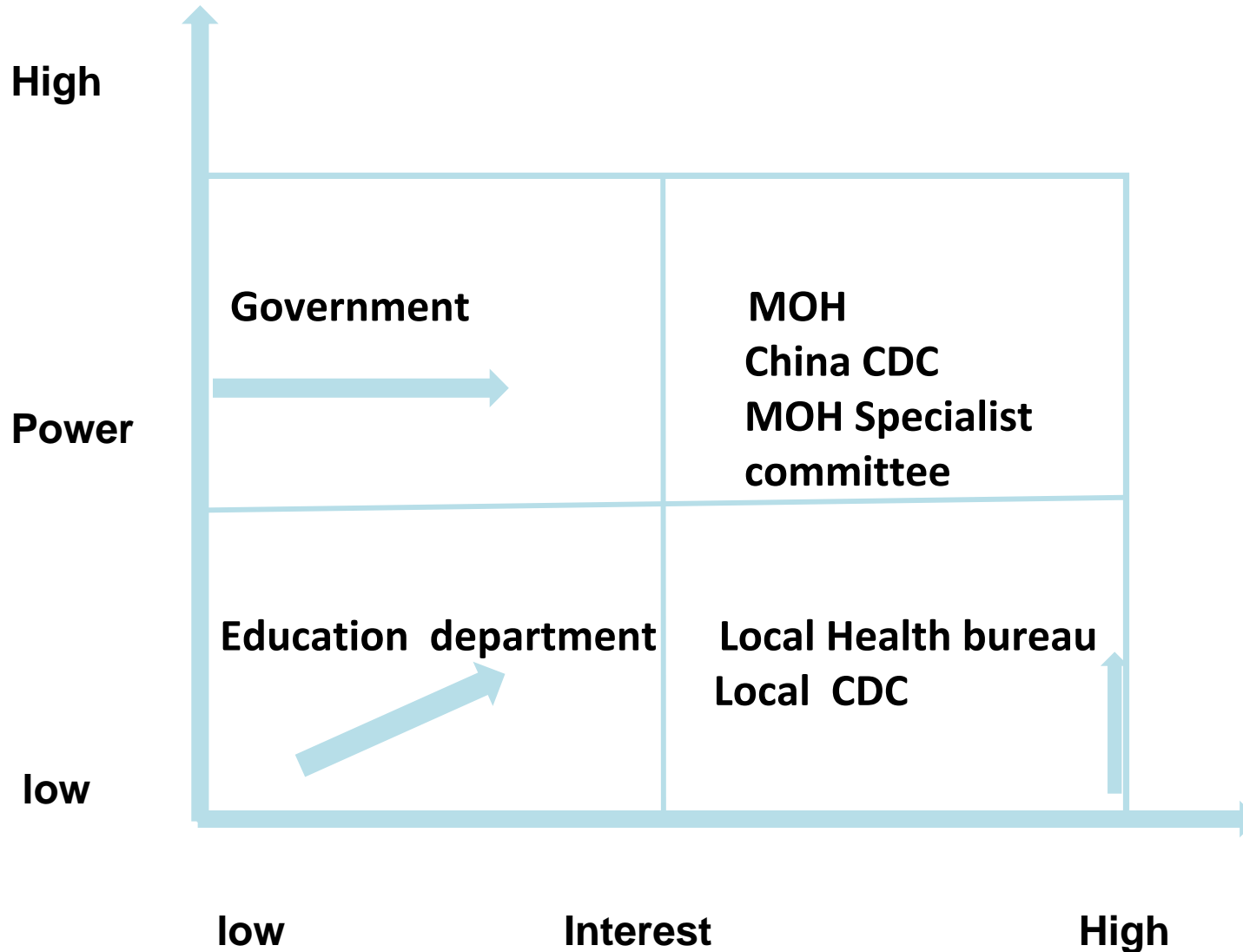


Organizational Structure of HFMD control in China





Stakeholder analysis





Roles of Stakeholders in HFMD control

Causes	Solutions		Stakeholders
1. People lack hygiene behavior 2. Lack of water and sanitation facility 3. Lack of effective isolation and quarantine	Short term activities	Response to outbreak promptly and evaluation of effect	CDC
		Treatment promptly	Hospital
		Effect evaluation of KAP and training	CDC
		Supervise and monitor to education and training	MOH, local health bureau, CDC
		Focus on KAP education to children and their parent or guardian	Health system
		Focus on training to teacher and doctor	Health system
		Proper environmental disinfection	CDC
		Increase accesses to obtain knowledge	ALL
	Long term activities	Regular KAP education for all people	MOH, Media
		Increase or reform sanitation facility	Local government
		Financial support to increase sanitation facility	Government



Action plan for policy adoption

China CDC

- Discussion of policy brief draft
- CDC technical expert group meeting to achieve consensus
- Review policy brief

MOH officials

- Review policy and suggest modification
- MOH technical expert group meeting to achieve consensus

Decision maker of MOH

- **Policy endorsed**



BETTER HEALTH BEHAVIOR, BETTER LIFE

CAPACITY OF HEALTH SYSTEM
IMPROVED

MORBIDITY OF HFMD AND OTHER
INFECTIOUS DISEASE DECREASE

BETTER WATER SUPPLY AND
SANITATION FACILITY INCREASE
IN HOME AND PUBLIC PLACES

EVERYONE HAS BETTER
HEALTH KNOWLEDGE,
ATTITUDE AND BEHAVIORS



Thank you for your attention

