Human disease surveillance in Japan

Risk analysis of spillover events in wildlife workshop

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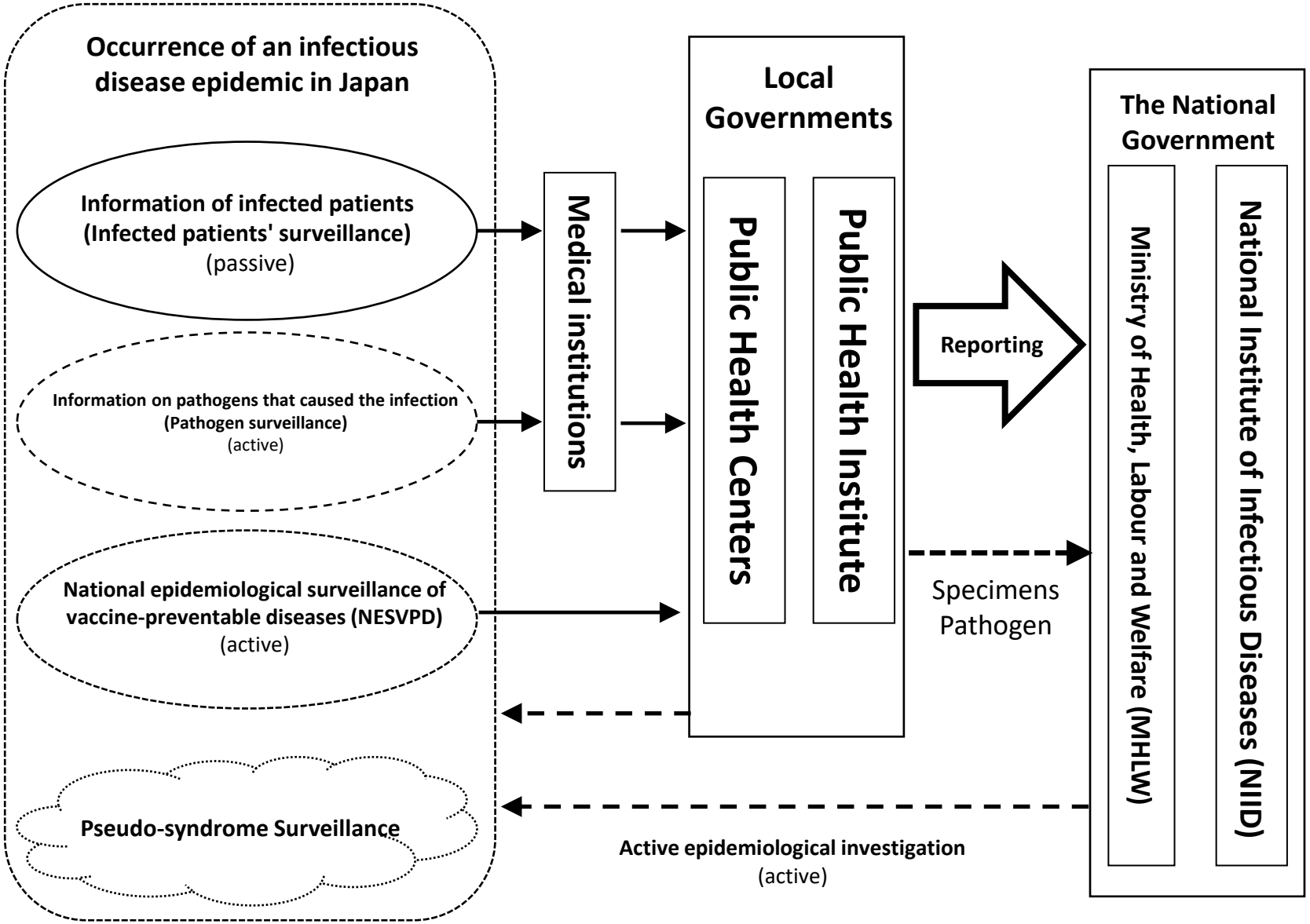
General information on the structure of services in Japan

Infectious disease surveillance based on the Infectious Disease Control Act*

(*Act on the Prevention of Infectious Diseases and Medical Care for Patients with Infectious Diseases)



Role of the National Government

- Formulation of nationwide uniform standards
- Information gathering from local governments based on standards
- Systematic gathering and analysis of information from around the country
- Application for measures to combat infectious diseases
- Provision and publication of information to citizens

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Priority diseases in Japan (1)

Infectious diseases listed in Infectious Diseases Control Act (subject to mandatory reporting by physicians)

Classification	Applicable infectious diseases and remarks
Class I Infectious Disease	[Law] Ebola hemorrhagic fever, Crimean-Congo hemorrhagic fever, smallpox, South American hemorrhagic fever, plague, Marburg disease, Lassa fever
Class II Infectious Disease	[Law] Acute poliomyelitis, tuberculosis, diphtheria, severe acute respiratory syndrome (only if the pathogen is SARS coronavirus), Middle East respiratory syndrome (only if the pathogen is MERS coronavirus), avian influenza (only if the pathogen is influenza A virus of genus *Influenzavirus* A, with a serum subtype H5N1 or H7N9; hereinafter collectively referred to as "specified avian influenza")
Class III Infectious Disease	[Law] cholera, shigellosis, Enterohemorrhagic *Escherichia coli* infection, typhoid fever, paratyphoid fever
Class IV Infectious Disease **Infectious Disease of Animal Origin**	[Law] Hepatitis E, hepatitis A, yellow fever, Q fever, rabies, anthrax, avian influenza (excluding specified avian influenza), botulism, malaria, tularemia [Cabinet Order] West Nile fever, echinococcosis, mpox, psittacosis, Omsk hemorrhagic fever, relapsing fever, Kyasanur Forest disease, coccidioidomycosis, Zika virus infection, severe fever with thrombocytopenia syndrome (only if the pathogen is SFTS virus of the genus *Phlebovirus*), hemorrhagic fever with renal syndrome, Western equine encephalitis, tick-borne encephalitis, chikungunya fever, Tsutsugamushi disease, dengue fever, Eastern equine encephalitis, Nipah virus infection, Japanese spotted fever, Japanese encephalitis, Hantavirus pulmonary syndrome, B virus disease, glanders, brucellosis, Venezuelan equine encephalitis, Hendra virus infection, epidemic typhus, Lyme disease, Lyssavirus infection, Rift Valley fever, melioidosis, legionellosis, leptospirosis, Rocky Mountain spotted fever
Class V Infectious Disease	[Law] Influenza (excluding avian influenza and novel influenza or re-emerging influenza), viral hepatitis (excluding hepatitis E and A), cryptosporidiosis, acquired immunodeficiency syndrome, genital chlamydial infection, syphilis, measles, methicillin-resistant *Staphylococcus aureus* infection [Order] Amebiasis, RS virus infection, pharyngoconjunctival fever, group A streptococcal pharyngitis, carbapenem-resistant Enterobacteriaceae infection, infectious gastroenteritis, acute flaccid paralysis (excluding acute poliomyelitis), acute hemorrhagic conjunctivitis, acute encephalitis (excluding West Nile encephalitis, Western equine encephalitis, tickborne encephalitis, Eastern equine encephalitis, Japanese encephalitis, Venezuelan equine encephalitis, and Rift Valley fever), chlamydial pneumonia (excluding psittacosis), Creutzfeldt-Jakob disease, severe invasive streptococcal infection, bacterial meningitis, giardiasis, COVID-19, invasive *Haemophilus influenzae* infection, invasive meningococcal infection, invasive pneumococcal disease, varicella, genital herpes simplex virus infection, condylomata acuminata, congenital rubella syndrome, hand, foot and mouth disease, erythema infectiosum, exanthema subitum, disseminated cryptococcal infection, tetanus, vancomycin-resistant *Staphylococcus aureus* infection, vancomycin-resistant enterococcal infection, pertussis, rubella, penicillin-resistant *Streptococcus pneumoniae* infection, herpangina, mycoplasma pneumonia, aseptic meningitis, multidrug-resistant *Acinetobacter* infection, multidrug-resistant *Pseudomonas aeruginosa* infection, epidemic keratoconjunctivitis, mumps, gonococcal infection
Designated infectious diseases	[Cabinet Order] (None at present) * Designated by a Cabinet Order, which expires after one year, but may be extended only once
New Infectious Disease	(None at present)
Novel Influenza, etc	[Law] novel influenza, re-emerging influenza, novel coronavirus infection, re-emerging coronavirus infection

Priority diseases in Japan (2)

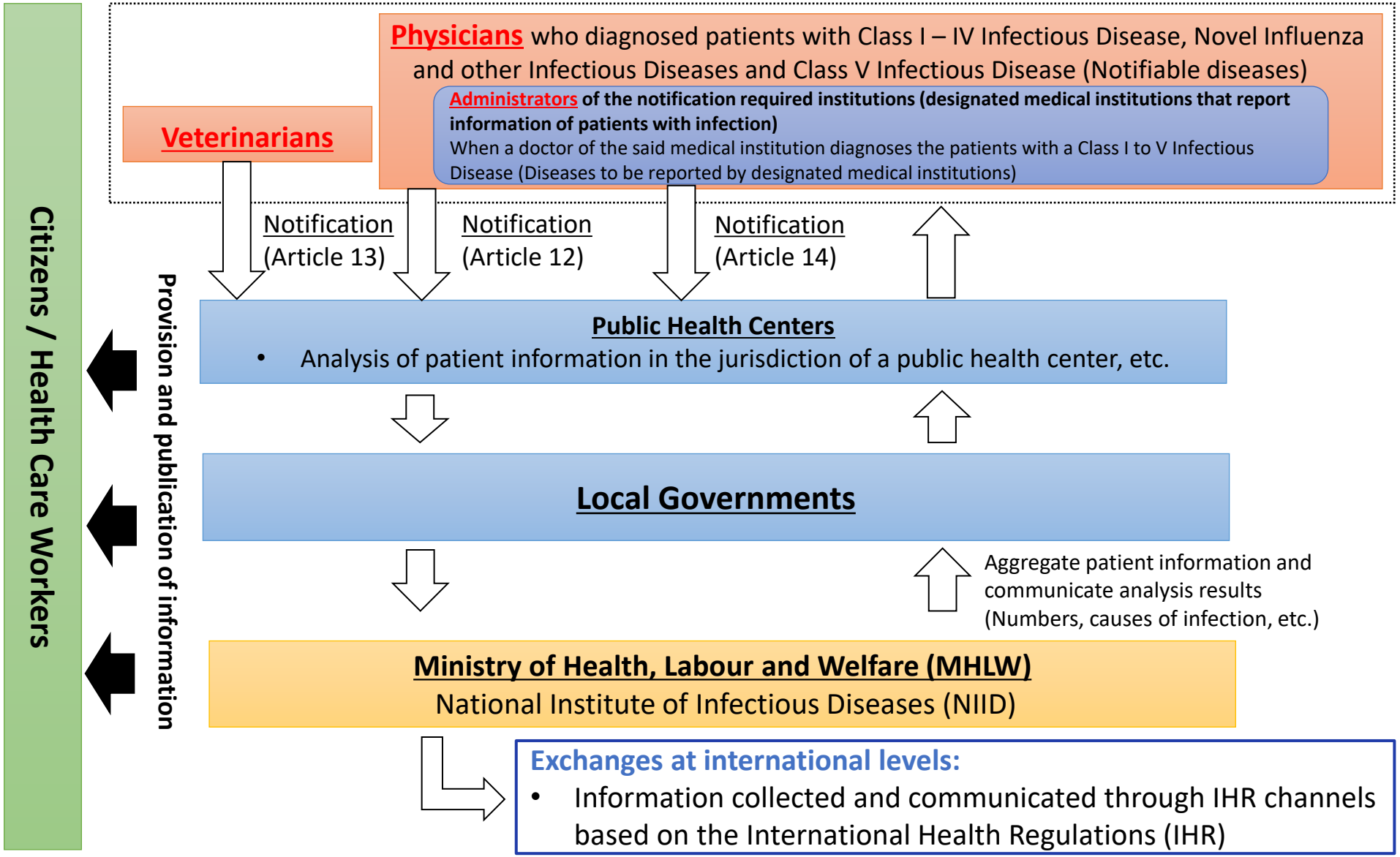
Animals and Zoonotic diseases subject to mandatory reporting by veterinarians

Mandatory Reporting by Veterinarians (Infectious Diseases Control Act)	
Animals	**Infectious Diseases**
Monkey	Ebola hemorrhagic fever
	Marburg virus disease
	Tuberculosis
	Shigellosis
Prairie dog	Plague
Civet, raccoon, and ferret badger	SARS
Bird	West Nile Fever
	Avian influenza (H5N1 or H7N9)
	Pandemic influenza
Dog	Echinococcosis
Dromedary camel	MERS
Mandatory Reporting by Veterinarians (Rabies Prevention Act)	
Animals	**Infectious Diseases**
Dog, Cat, Raccoon, Fox, and Skunk	Rabies

Reporting channel & data exchanges

Patient Information: Gathering, Analysis, Providing, and Publishing

References
https://www.mhlw.go.jp/stf/seisakunitsuite/bunya/0000115283.html



Municipality/prefectural & country level surveillance system in Japan

- **Country level surveillance system**

① **Infected patients and animal surveillance** (passive) (Notification by Physicians or Veterinarians)
② **Pathogen surveillance** (active)
③ **National epidemiological surveillance of vaccine-preventable diseases (NESVPD)** (active)
④ **Active epidemiological investigation** (active)
  - Allows national/local governments to conduct surveys on infectious status in both animals and humans

- **Municipality/prefectural level surveillance system**

◆ Survey on rabies virus in wild animals (raccoon, raccoon dog, etc.) by local governments
◆ Collection of epidemiological information on zoonotic diseases (surveillance)
◆ Research:
  - Collaborate with NIID on pathogens infection status in animals (e.g., SFTS in dogs and cats, tularemia in wild animals, new coronavirus in dogs and cats, etc.)
  - Reporting the number of dead animals using the **“Dead Animal Surveillance (DAS)”** (Local government/national research institute)

Strengths in the system

Examples of what is working well in the system

- The Act allows monitoring of infectious status across the country.
- The NIID collects and analyzes information. Experts are available for dispatch for on-site support, which allows for appropriate measures and identification of the source of infection.
- The data is published on its website.

◆ National Institute of Infectious Diseases (NIID)
https://www.niid.go.jp/niid/ja/

◆ Infectious Diseases Weekly Report (IDWR)
https://www.niid.go.jp/niid/ja/idwr.html

◆ Infectious Agents Surveillance Report (IASR)
https://www.niid.go.jp/niid/ja/iasr.html

NIID
NATIONAL INSTITUTE OF INFECTIOUS DISEASES
国立感染症研究所


Infectious Diseases Weekly Report JAPAN
IDWR 感染症週報
感染症の予防及び感染症の患者に対する医療に関する法律
感染症発生動向調査
厚生労働省／国立感染症研究所
マークをクリックするとそのページを見ることができます
発生動向総覧 P.2-10
＜第51・52週＞インフルエンザの定点当たり報告数は第42週以降増加が続いており、過去5年間の同時期と比較してやや多い／その他最新動向
注目すべき感染症
＜今週は該当記事はありません＞
感染症関連情報 P.11-12
病原体情報／海外感染症情報／その他
速報
＜今週は該当記事はありません＞
読者のコーナー
＜今週は該当記事はありません＞
グラフ総覧(52週) P.13-19
51週のデータ P.20-34
52週のデータ P.35-49


病原微生物検出情報 月報
Infectious Agents Surveillance Report (IASR)
https://www.niid.go.jp/niid/ja/iasr.html
Vol.44 No.10 (No.524)
2023年10月発行
＜特集＞ HIV/AIDS 2022年
本邦の2022年のHIV/AIDS報告数
図1. HIV感染者およびAIDS患者の累積報告数, 1985～2022年
図2. HIV感染者およびAIDS患者の新規報告数の年次推移, 1985～2022年

Gaps & barriers in the system

Based on the Covid-19 experience, medium- to long-term challenges for the next infectious disease crisis were compiled.
(Cabinet Secretariat: https://www.cas.go.jp/jp/seisaku/coronavirus_yushiki/index.html)

Gaps identified in the system during Covid-19 pandemic:

1. **Need for strengthening medical institutions:**
   Burden on medical institutions to input patient data.

2. **Need for strengthening the public health center system**
   Public health center operations were under pressure.

3. **Need for strengthening testing capacity**

4. **Need for strengthening surveillance**
   Experts were not provided with on-site epidemiological information, genomic information, etc. that are necessary to analyze the incidence of patients, the characteristics of the virus, the infection status, etc. Furthermore, there was no uniformity in the information released by the national government, local governments, research institutions, etc., making it difficult to quickly analyze time-series data.

Barriers that blocked optimal function of the system:

- **Digitalization and information infrastructure.**

Future perspectives

- **What can be done to improve the system in the future? What lessons were learnt from the COVID-19 pandemic?**

Amended the relevant Laws

Amendment of the Infectious Disease Control Act

Taking the response to the Covid-19 infection into consideration, in order to prepare for the occurrence or spread of infections, situations which could exert serious influence on the lives and health of the people, through collaboration among the State or prefectures and the relevant organizations, procurement of hospital beds, outpatient medical care and medical care human resources and materials for infection countermeasures will be strengthened, public health center and examination systems will be strengthened, and measures will be taken to achieve the development of information infrastructure, flexible execution of vaccination, and effective border control measures, etc.

Government Restructuring

- Taking the response to the Covid-19 infection into consideration, in order to strengthen functions related to comprehensive coordination of measures to prevent the outbreak and spread of infectious diseases, the system will be put in place to enable the Headquarters for Pandemic Influenza Countermeasures to take prompt and accurate measures from the initial stage. Furthermore, **the Cabinet Agency for Infectious Disease Crisis Management** will be established within the Cabinet Secretariat, which will oversee affairs related to comprehensive coordination of measures and affairs related to task force headquarters.
- The government established **the Cabinet Agency for Infectious Disease Crisis Management** on September 1, 2023.
  (With the establishment of the agency, MHLW also set up **Department of Infectious Disease Prevention and Control**.)

Establishment of the Institute for Health Security

The institute for health security will be established by unifying **National Institute of Infectious Diseases** and **National Center for Global Health and Medicine** for carrying out investigation and research, providing medical treatment, international cooperation, staff training with respect to infectious and other diseases, and for strengthening the organization which is capable of providing scientific information by comprehensively conducting initial epidemiological studies through clinical research at the time of outbreak and spreading of infectious diseases, which may give a serious impact on people's lives and health.

⇒It is scheduled to be established in the FY2025.

Thank you

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