

米国CDCの組織図：感染症、危機対応に加え様々な健康課題に対応



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国際保健
危機対応
コミュニティ**

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**検査科学
サーベイランス
統計**

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Karen Hacker, MD, MPH

National Center for Environmental Health/Agency for Toxic Substances and Disease Registry
Patrick Breyse, PhD, CIH*

National Center for Injury Prevention and Control
Debra Houry, MD, MPH

**非感染性疾患
母子保健
環境保健
傷害予防**

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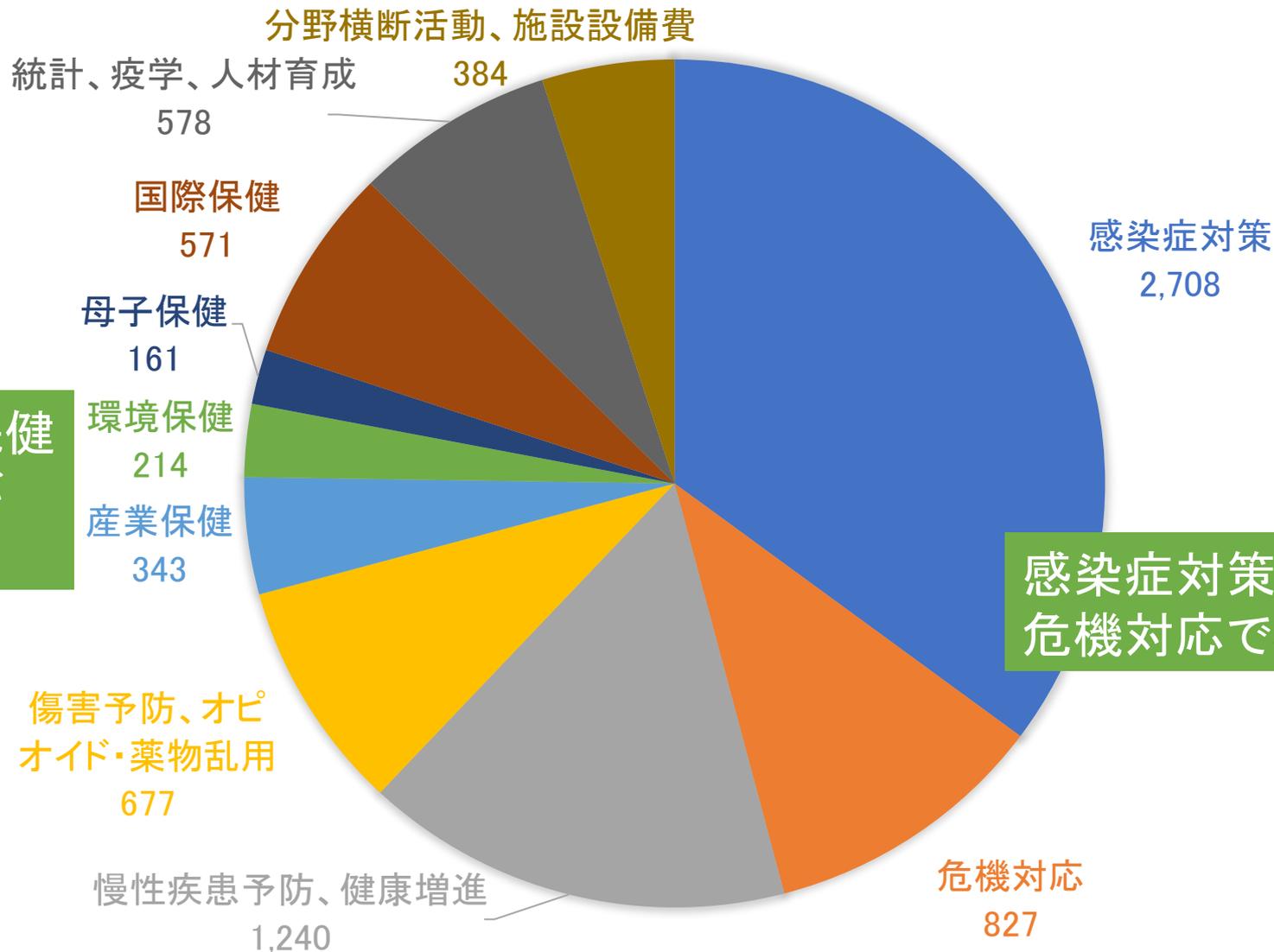
National Center for Immunization and Respiratory Diseases
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National Center for Emerging and Zoonotic Infectious Diseases
Rima Khabbaz, MD

National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention
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感染性疾患

米国CDCの予算：76.9億ドル（2020年度）



他の保健分野が30%強

感染症対策と危機対応で50%弱

円グラフにおける単位は100万米ドル、予算成立時の額。

<https://www.cdc.gov/budget/index.html>

米国CDCの組織

- ① 感染性疾患関連の部署
- ② 非感染性疾患関連の部署
- ③ 産業保健関連の部署
- ④ 公衆衛生サービスと実践科学
- ⑤ 公衆衛生科学とサーベイランス関連の部署

① 感染性疾患関連の部署

- National **Center** for Immunization and Respiratory Diseases (NCIRD)
 - 呼吸器疾患（細菌性疾患、インフルエンザ、ウイルス性疾患）
（COVID-19に関するメイン部署）
 - 予防接種サービス
- National **Center** for Emerging and Zoonotic Infectious Diseases (NCEZID)
 - 新興感染症、食中毒、人獣共通感染症
- National **Center** for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention (NCHHSTP)
 - HIVや肝炎ウイルスなど、慢性な感染症

②非感染性疾患関連の部署

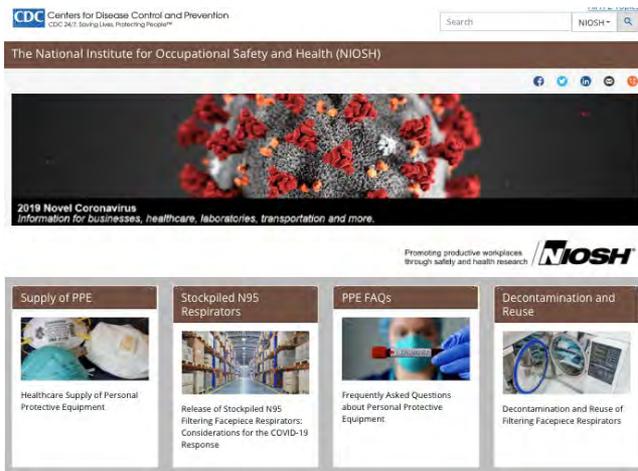
- National **Center** on Birth Defects and Developmental Disabilities (NCBDDD)
 - 先天奇形、発達障害、遺伝性血液疾患、身体障害
- National **Center** for Chronic Disease Prevention and Health Promotion (NCCDPHP)
 - がん、糖尿病、栄養・運動・肥満、喫煙、心血管疾患、口腔疾患、母子保健、学校保健、その他多くの疾患・健康課題
- National **Center** for Environmental Health/Agency for Toxic Substances and Disease Registry (NCEH/ATSDR)
 - 環境保健、自然災害、有害物質
- National **Center** for Injury Prevention and Control (NCIPC)
 - 事故予防、転倒予防、暴力予防、オピオイド過量服薬など

③産業保健関連の部署

National Institute for Occupational Safety and Health (NIOSH)

● 産業保健に関する総合センター

- 事故予防
- メンタルヘルス
- COVID-19
- 自然災害やテロへの対応
- 福島第1原発からの放射能拡散
など幅広い分野を扱っている



FIGHTING WILDFIRES



Every year, millions of acres of land burn across the United States and wildland firefighters (WFFs) are asked to protect our lives, our homes, and our forests. But fires are unpredictable and dangerous. Between 2000-2019, based on data compiled in the NIOSH Wildland Firefighter On-Duty Death Surveillance System from three data sources, over 400 on-duty WFF fatalities occurred.^{1,2,3} Common hazards faced on the fire line can include burnovers/entrapments, heat-related illnesses and injuries, smoke inhalation, vehicle-related injuries (including aircraft), slips, trips, and falls, and others.⁴ In addition, due to prolonged intense physical exertion, WFFs are at risk for sudden cardiac deaths and rhabdomyolysis.

NIOSH offers resources for fire departments, firefighters, and partner organizations to prevent on-duty injuries, illnesses, and deaths from hazards and exposures associated with fighting wildfires.

CDC and NIOSH also provide resources for responders in conducting rescue and clean-up activities.

Featured Publication

Wildland Firefighting: Hot Tips to Stay Safe and Healthy!

[learn more](#)

RADIATION DISPERSAL FROM JAPAN



Efforts continue in Japan to contain the release of airborne radioactive contamination from the damaged Fukushima Daiichi power plant.

On March 17, President Obama stated: "We do not expect harmful levels of radiation to reach the United States, whether it's the West Coast, Hawaii, Alaska, or U.S. territories in the Pacific... Furthermore, the Centers for Disease Control and Prevention and public health experts do not recommend that people in the United States take precautionary measures beyond staying informed." (<http://www.whitehouse.gov/the-press-office/2011/03/17/remarks-president-situation-japan>)

Radiation occurs in many forms at low levels as a part of everyday life, from residual cosmic radiation in the atmosphere to medical applications such as x-rays and CT scans. Taking extraordinary steps to prevent exposure to radiation in the absence of a known risk can create problems of its own. For example, potassium iodine pills can cause intestinal upset, allergic reactions, and other symptoms, and should only be taken on the advice of emergency management officials, public health officials, or your doctor.

This page provides information to help workers, employers, and occupational health professionals stay informed about ongoing Federal activities to address the release of airborne contamination from the damaged Japanese power plant. The page will be updated as new information becomes available.

NIOSH is also working jointly with GSHA to provide up-to-date worker protection information. To view GSHA's page go to <http://iosha.gov/radiation-japan/index.html>

④ 公衆衛生サービスと実践科学

- **Center** for Preparedness and Response (CPR)
 - 緊急時のための準備、緊急時の対応
 - CDC Emergency Operation Center
- **Center** for State, Tribal, Local, and Territorial Support (CSTLTS)
 - 州や地方のサポート
- **Center** for Global Health (CGH)
 - グローバルヘルス、FETPの運営
 - 60か国以上にCDCの人材を派遣
- Office of Minority Health and Health Equity (OMHHE)
 - 健康格差、マイノリティ、女性の健康など

⑤ 公衆衛生科学とサーベイランス関連の部署

- **Center** for Surveillance, Epidemiology, and Laboratory Services (CSELS)
 - Epidemic Intelligence Service (EIS)の運営
 - Morbidity and Mortality Weekly Report (MMWR)の発行
 - 調査方法の開発など
- National **Center** for Health Statistics (NCHS)
 - National Health and Nutrition Examination Survey (NHANES)など、各種全国統計調査の実施
 - National Death Indexなどの作成
- Office of Laboratory Science and Safety (OLSS)
 - 検査科学、バイオセーフティなど
- Office of Science (OS)
 - 倫理委員会、情報公開など

米国CDCの活動内容

- ① 調査・研究
- ② 情報発信・助言
- ③ 緊急対応
- ④ 検疫・隔離
- ⑤ 人材育成

①調査・研究

- 一時的な調査 (Epidemiologic Assistance, Epi-Aids)
 - 州の保健機関、他国の保健関連省庁などの求めに応じる
 - EIS Officersが主に対応(24時間365日)
 - 主に1-3週間の対応
 - 疫学者、検査技師などのリソースをサポート
 - 感染症のみならず、化学物質の漏洩などあらゆるハザードに対応



ライム病調査のためダニを採集するEIS officer.
CDC Epi-Aids ウェブサイトより.

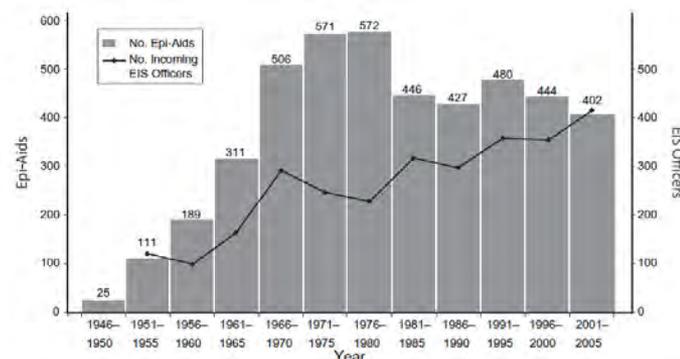


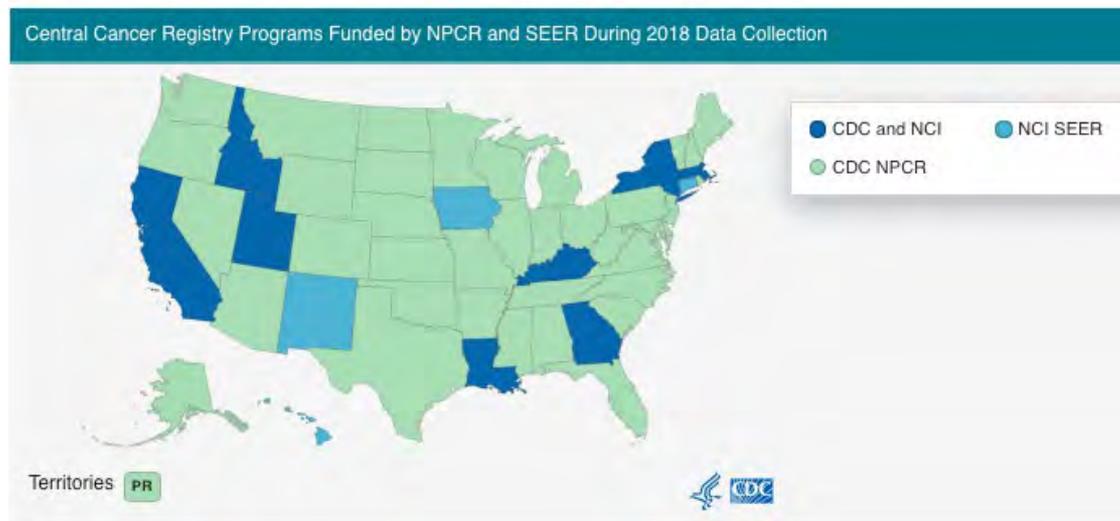
Figure 1. Number of epidemiologic-assistance investigations (Epi-Aids; N = 4,484) and incoming Epidemic Intelligence Service (EIS) officers (N = 2,815), by year, 1946-2005.

● 定期的な調査・研究

- National Notifiable Diseases Surveillance System (NNDSS)
 - 感染症が主体だが、がんなども含まれる
- National Center for Health Statistics (NCHS)が扱う統計
 - National Health and Nutrition Examination Survey (NHANES)
 - National Health Interview Survey (NIS)
 - National Ambulatory Medical Care Survey (NAMCS)
 - National Death Index (NDI) など
- 各疾患・状態に関する個別の調査
 - National Program of Cancer Registries (NPCR)など



Surveillance Resource Center ウェブサイトより.



NPCRは、NCI (NIHの一部局)の研究(SEER)と共同して全米の情報を収集する。
CDC ウェブサイトより.

National Health and Nutrition Examination Survey (NHANES)

- 日本の国民健康・栄養調査に相当
- 米国全体の市民を母集団とした調査デザイン
- 家庭での面談調査と、Mobile Examination Center (MEC)での検査・面談が行われる
- 匿名加工後の個票データを、研究に必要な“重み”などの情報とともに公開、誰でもダウンロード可能
 - ほぼ全ての統計情報で同じ扱い
- 1999年以降は2年毎にデータ公開



Mobile Examination Center (MEC). CDCウェブサイトより.

A screenshot of the CDC website's NHANES data release page. The page header includes the CDC logo and the text 'Centers for Disease Control and Prevention'. Below the header is a navigation bar with letters A-Z. The main content area is titled 'National Health and Nutrition Examination Survey' and includes a sidebar with navigation links like 'About NHANES', 'What's New', and 'Search Variables'. The main content area lists 'NHANES 2011-2012 Questionnaire Data' with bullet points for 'NHANES 2011-2012 Questionnaire Variable List', 'Questionnaire Instruments', '2011-2012 Questionnaire Data Overview', and 'SAS Universal Viewer'. Below this is a table with columns for 'Data File Name', 'Doc File', 'Data File', and 'Date Published'.

Data File Name	Doc File	Data File	Date Published
Acculturation	ACQ_G Doc	ACQ_G Data [XPT, 321.9 KB]	August, 2014
Alcohol Use	ALQ_G Doc	ALQ_G Data [XPT, 440.8 KB]	October, 2013
Audiometry	AUQ_G Doc	AUQ_G Data [XPT, 2.1 MB]	December, 2013
Blood Pressure & Cholesterol	BPO_G Doc	BPO_G Data [XPT, 726.5 KB]	September, 2013
Cardiovascular Health	CDQ_G Doc	CDQ_G Data [XPT, 481.6 KB]	September, 2013

データ公開ページ. CDCウェブサイトより.

②情報発信・助言

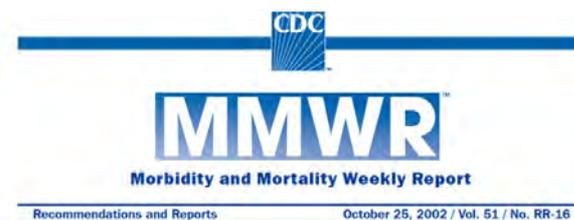
- ホームページからの情報発信
- 啓発キャンペーン、プログラム
- ガイドライン作成
- Health Alert Network (HAN)
- 刊行物の発行 - MMWR(毎週発行)など
- Epi-Aidsなどによる現地での助言
- 政府関係者からの照会への対応(24時間以内に返答)



CDCウェブサイトより.



手作り布マスクの作り方に関する動画 CDCウェブサイトより.



Guideline for Hand Hygiene in Health-Care Settings

Recommendations of the Healthcare Infection Control Practices
Advisory Committee and the HICPAC/SHEA/APIC/IDSA
Hand Hygiene Task Force

医療現場における手指衛生ガイドライン.

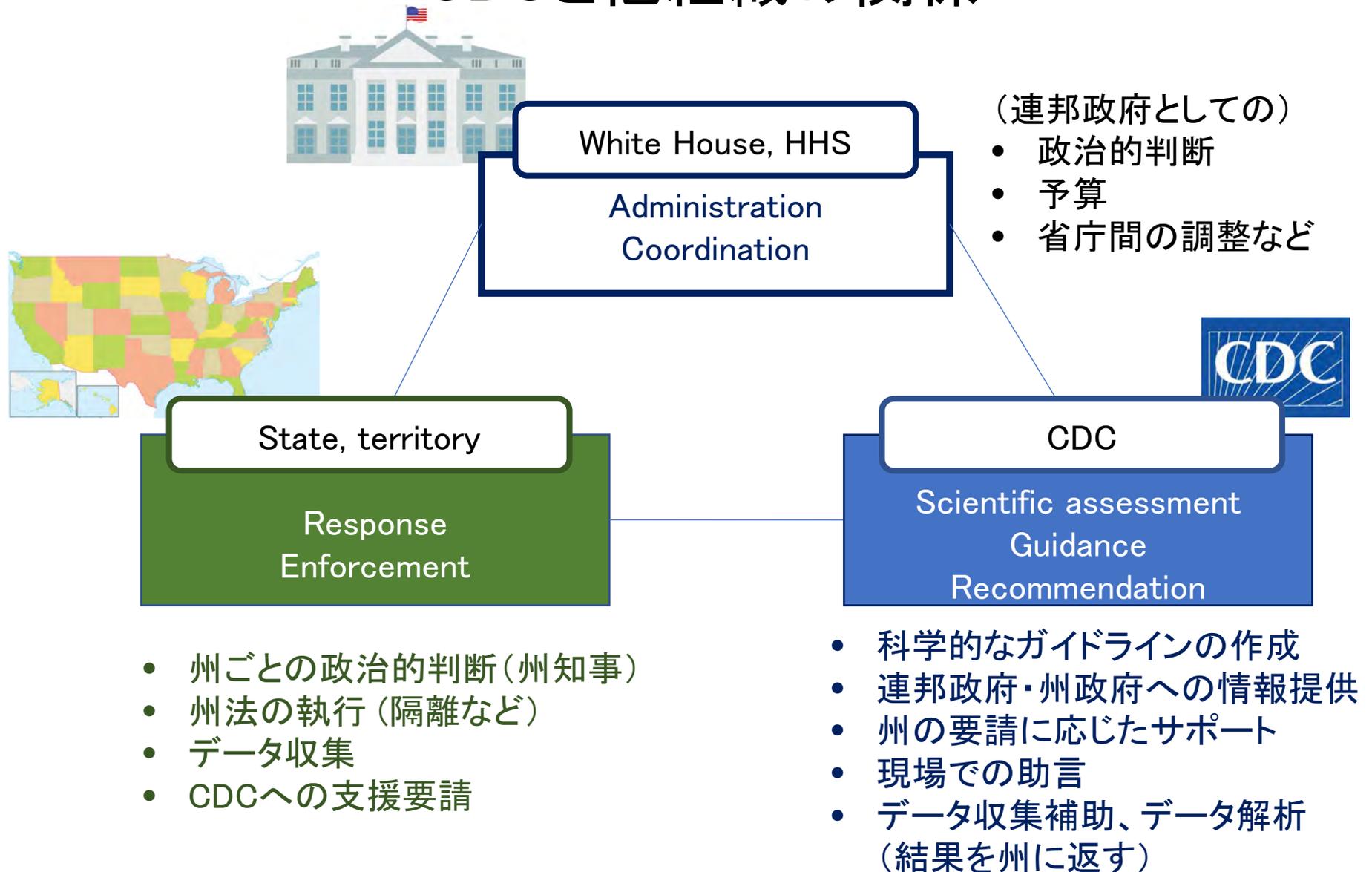
③緊急対応

- Emergency Operations Center (EOC)
- Center for Preparedness and Responseに常設
- 業務：
 - 専門家の派遣
 - 現場への物資や機器の配送の調整
 - レスポンス活動のサーベイランス
 - 州および地方の公衆衛生部門にリソースを提供
- 国外への対応もありうる
- 最近の対応：
 - COVID-19
 - Ebola (コンゴ共和国)
 - E-cigarette use



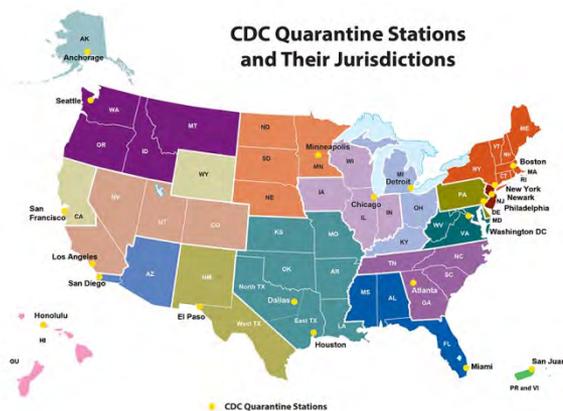
EOCの様子. CDCウェブサイトより.

CDCと他組織の関係



④ 検疫・隔離 (quarantine, isolation)

- National Center for Emerging and Zoonotic Infectious Diseases (NCEZID), Division of Global Migration and Quarantine (DGMQ) が所管
- 連邦法により、HHSは感染症を防ぐために入国や州間の移動を制限することができる (CDCが代理に執行)
 - 感染症を疑う移動者の拘留、検査を行うことができる
- 州法は州内での検疫・隔離を強制できる



Quarantine Stationの設置箇所。
CDCウェブサイトより。



Quarantine Stationの表示。
CDCウェブサイトより。