2019-nCoV
Epidemiologia, Algoritmi diagnostici di gestione del caso

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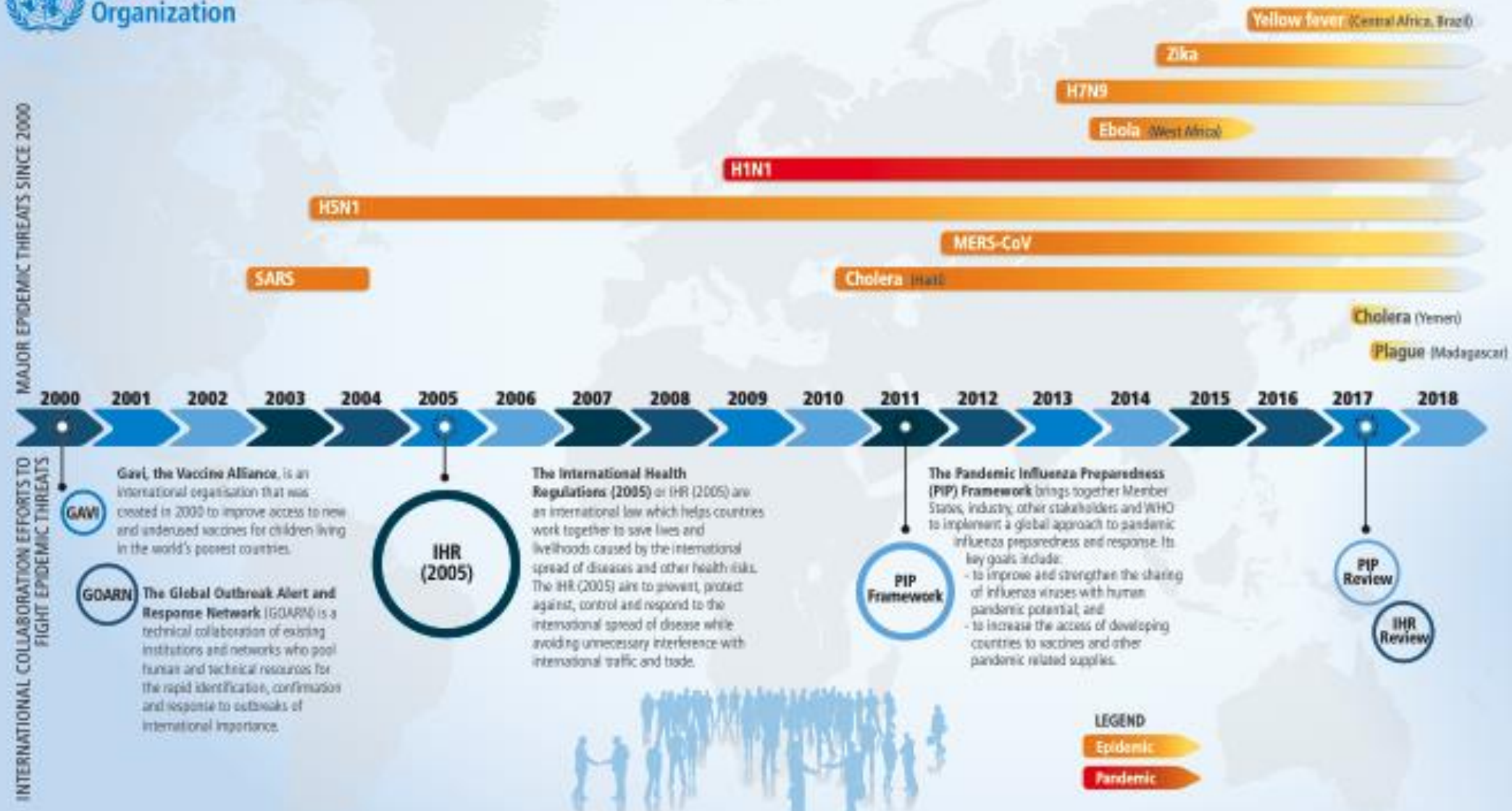
Di cosa Parleremo?

- Malattie Infettive e Outbreak
- Gestione di un Outbreak
- 2019-nCoV:
  - Epidemiologia
  - Definizione e Gestione di caso
  - Prevenzione e tracking dei casi
  - Comunicazione

World Health Organization



Timeline

Major infectious threats in the 21st Century & collaboration mechanisms to fight against them

PHILOSOPHICAL TRANSACTIONS B

royalsocietypublishing.org/journal/rstb

Review

Cite this article: Polonsky JA *et al*. 2019 Outbreak analytics: a developing data science for informing the response to emerging pathogens. *Phil. Trans. R. Soc. B* **374**:

Outbreak analytics: a developing data science for informing the response to emerging pathogens

Jonathan A. Polonsky[1,3,†], Amrish Baidjoe[4,†], Zhian N. Kamvar[4], Anne Cori[4], Kara Durski[2], W. John Edmunds[5,6], Rosalind M. Eggo[5,6], Sebastian Funk[5,6], Laurent Kaiser[3], Patrick Keating[5,8], Olivier le Polain de Waroux[5,8,9], Michael Marks[7], Paula Moraga[10], Oliver Morgan[1], Pierre Nouvellet[4,11], Ruwan Ratnayake[5,6], Chrissy H. Roberts[7], Jimmy Whitworth[5,8] and Thibaut Jombart[4,5,8]

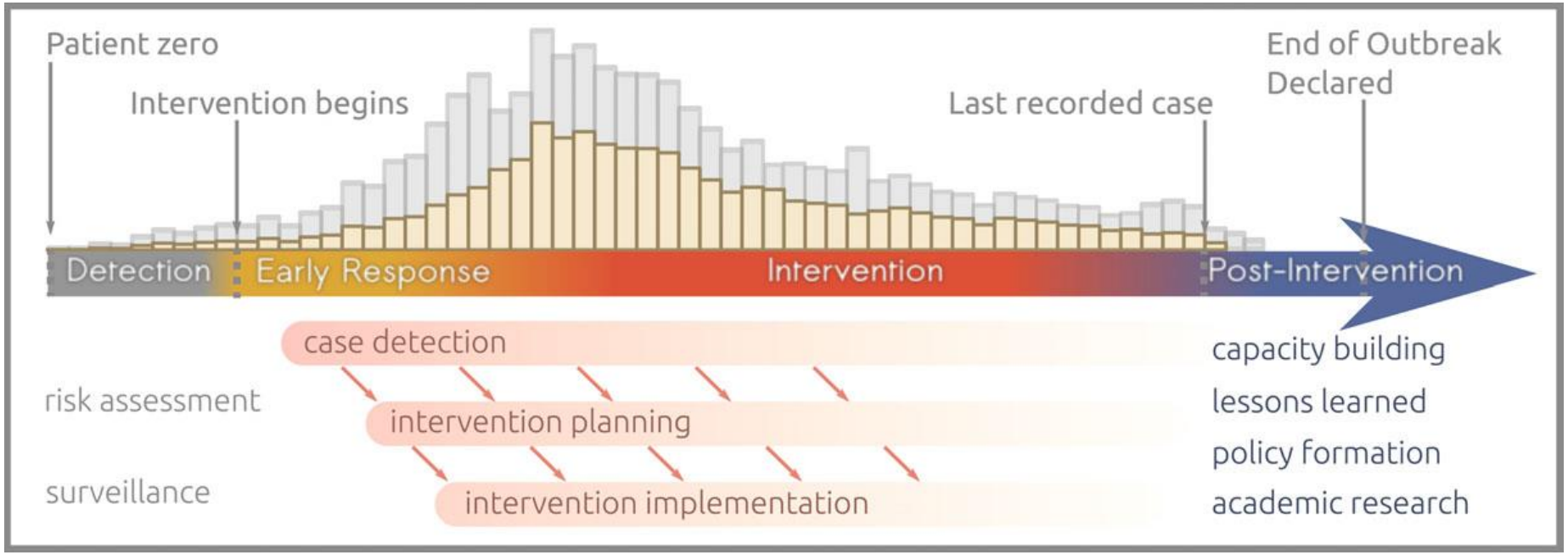


Figure 1. Successive phases of an outbreak response. The histogram along the top represents reported (yellow) and unreported (grey) incidence.

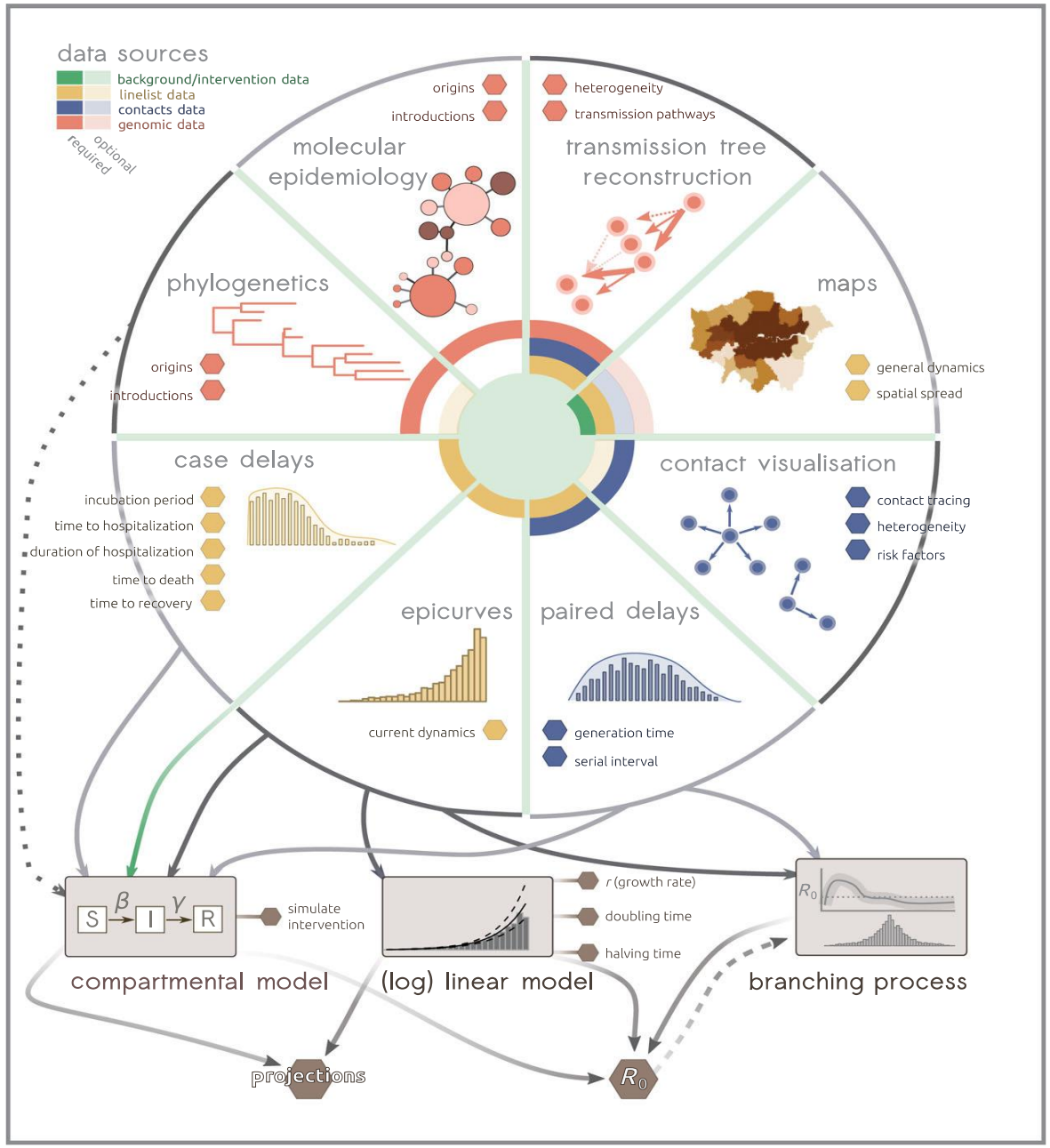
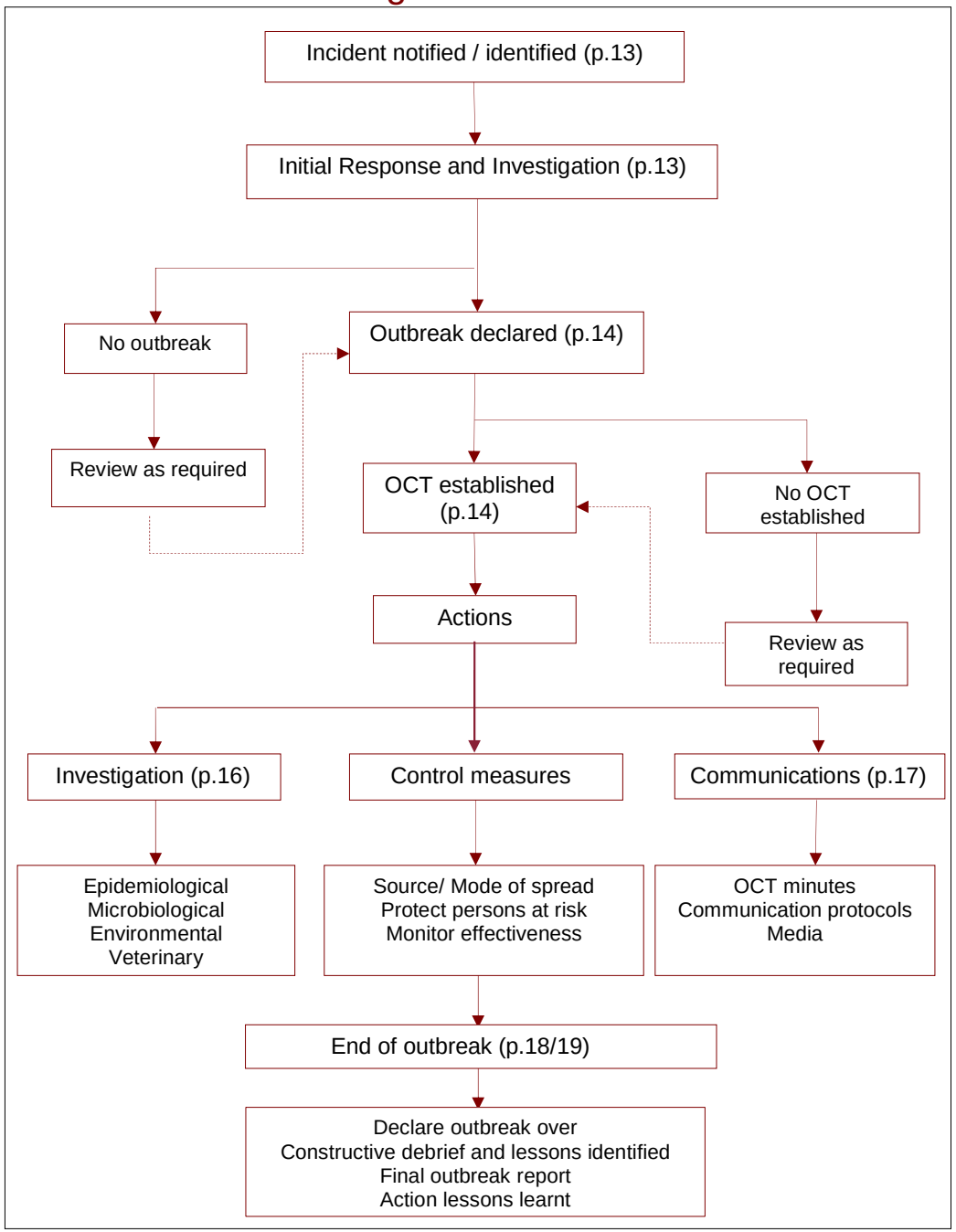


Figure 2. Example of outbreak analytics workflow. This schematic represents eight general analyses that can be performed from outbreak data. Outputs containing actionable information for the operations are represented as hexagons. Data needed for each analysis are represented as a different colour in the center, using plain and light shading for mandatory and optional data, respectively. (Online version in colour.)

Outbreak management overview[2]



Planning for Epidemics — The Lessons of SARS

Robert A. Weinstein, M.D.

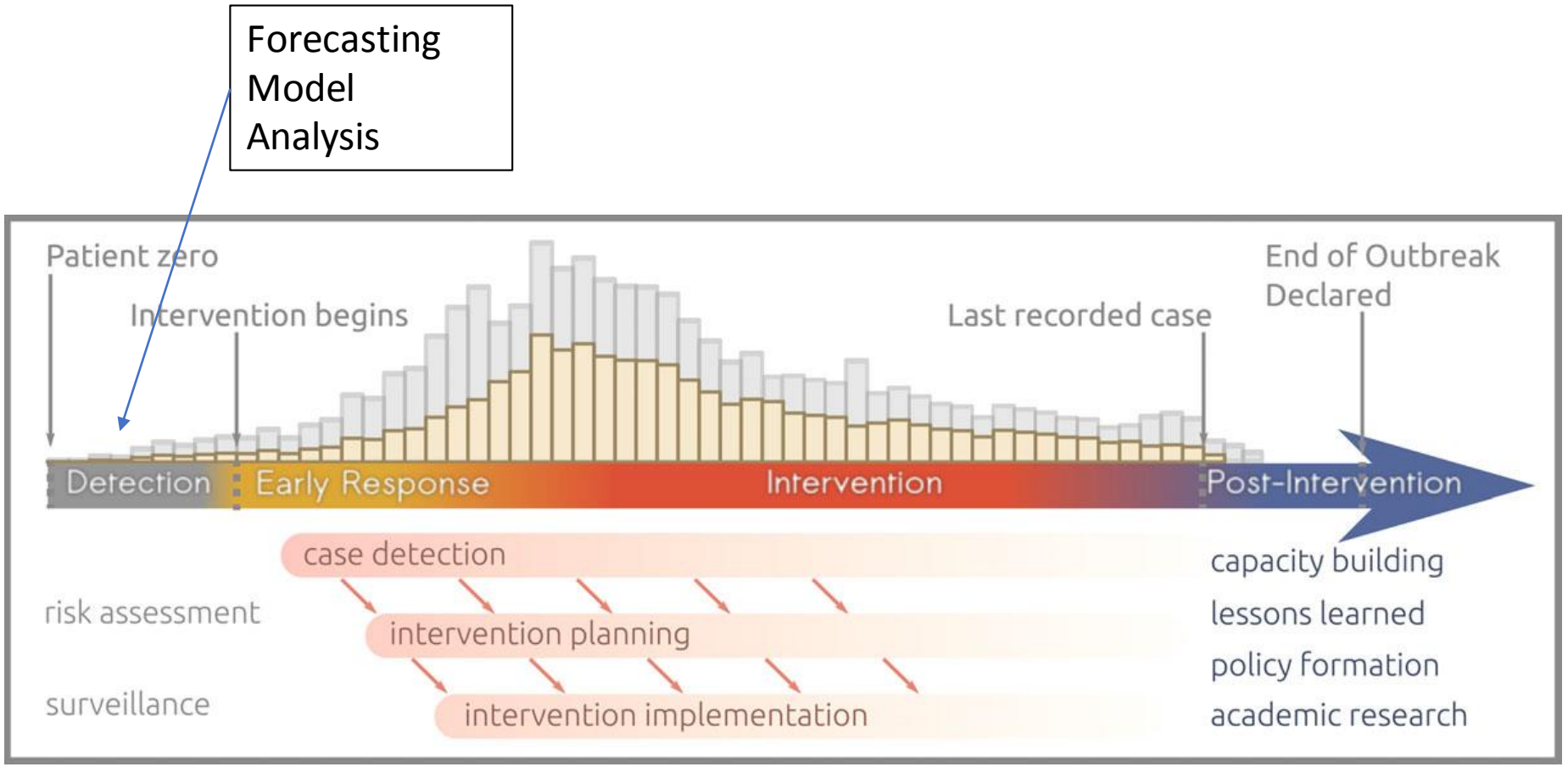
N ENGL J MED 350;23 WWW.NEJM.ORG JUNE 3, 2004

Group	Intervention	Public Health Issues	Infection-Control Issues
Patients with cases	Case management	Open reporting of cases and surveillance results	When to institute incident command system
Patients with potential cases	Infection control at health care facilities	Case definition, epidemiologic history	Appropriate isolation (depending on mode of transmission)
		Diagnostic tests	Role of superspreaders and high-risk procedures
		Duration of communicability	Diagnostic tests and treatments
Contacts of patients with cases	Contact tracing and investigation, assessment of need for quarantine and community containment	When to open emergency operation centers	Safety measures for clinical and research laboratories
		Onset of communicability (before or after onset of symptoms)	Surge capacity (isolation beds, masks, equipment; ventilators; emergency room space; health care worker backup; morgue)
Persons who are healthy but worried	Education, communication, and risk assessment	Incubation period	Respiratory hygiene in emergency room and clinics
		Modes of transmission (airborne, large droplets, contact)	
		Role of environmental and animal reservoirs (for source containment)	
		Vaccine availability	

Figure. Public Health and Infection-Control Measures during Major Outbreaks of Communicable Diseases.

During the SARS outbreak in Toronto in 2003, for every patient with SARS, there were approximately 10 patients with potential cases of SARS, 100 contacts of patients with SARS, and 1400 healthy but worried people. The order in which the public health and infection-control issues are listed reflects the order in which the groups and interventions appear.

2020 Pandemic Strategy



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European Review for Medical and Pharmacological Sciences 2020; 24: 2162-2164

Editorial – Novel Coronavirus 2019 (Sars-CoV2): a global emergency that needs new approaches?

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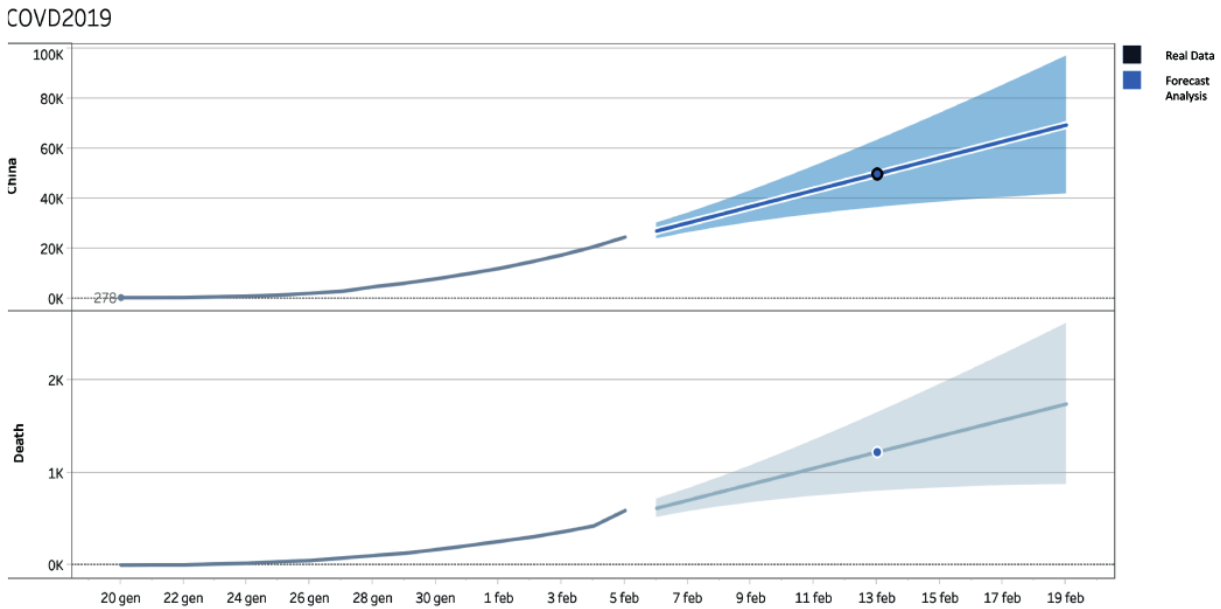
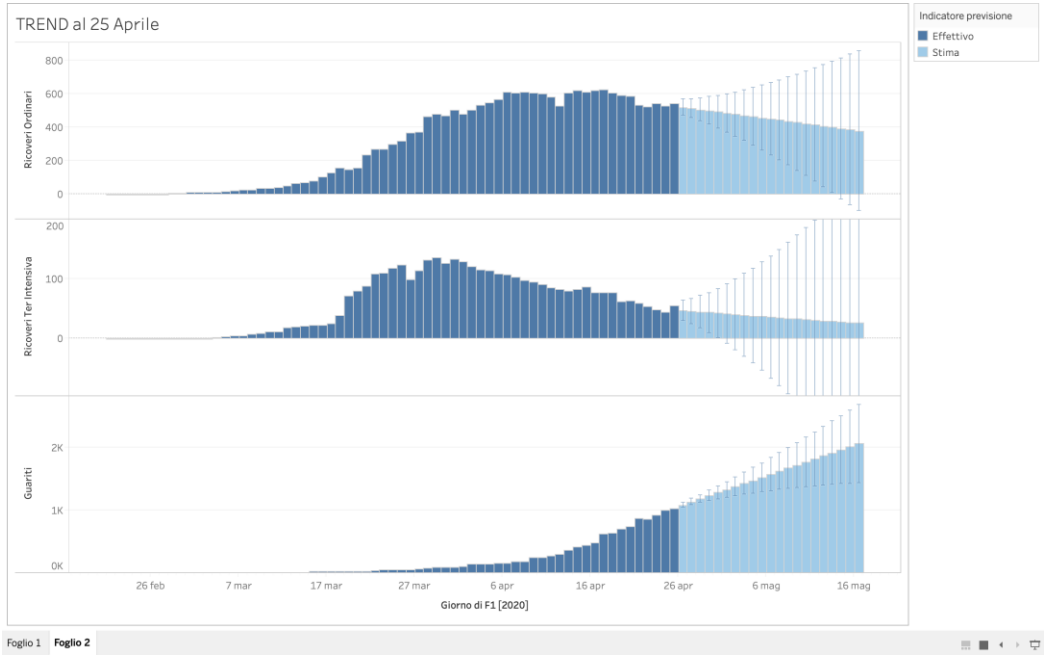
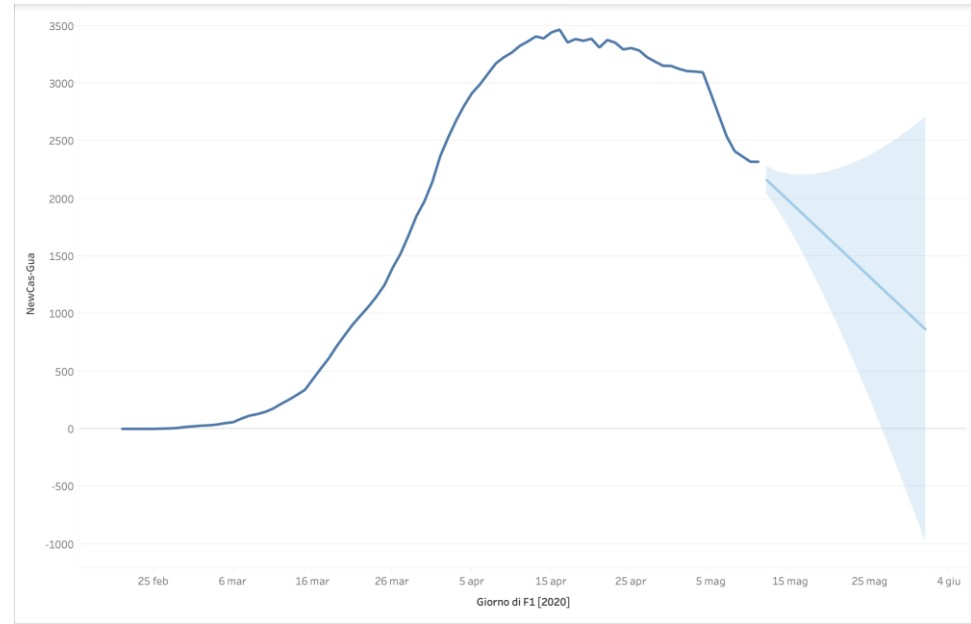


Figure 1. New registered COVID 2019 cases in China and death rate and relative forecast analysis.


TREND al 25 Aprile
Indicatore previsione
Effettivo
Stima
Ricoveri Ordinari
Ricoveri Ter Intensiva
Guariti
Giorno di F1 [2020]
Foglio 1
Foglio 2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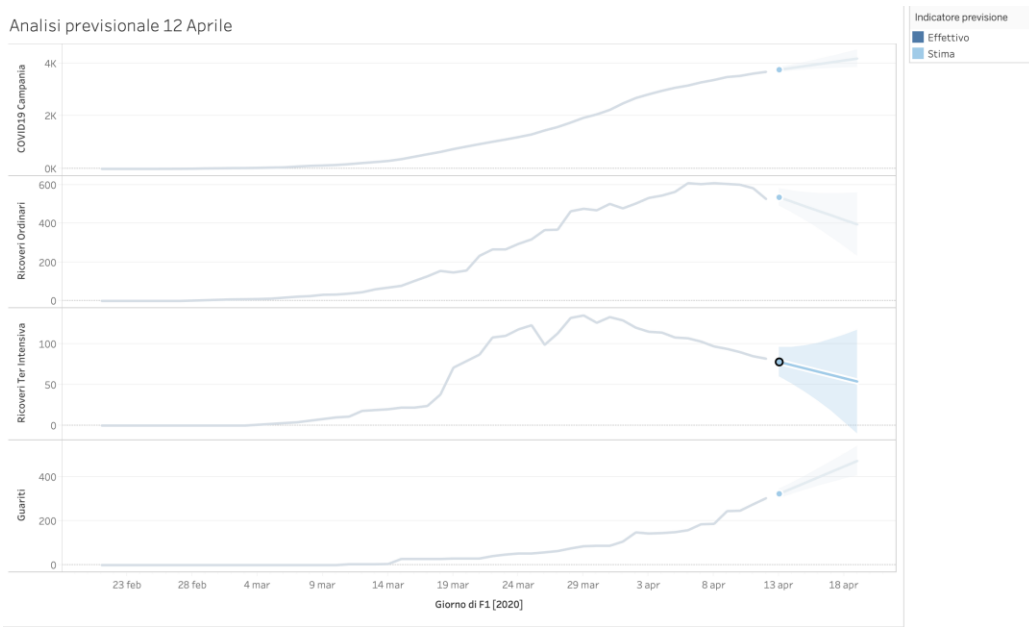
Analisi previsionale 12 Aprile
Indicatore previsione
Effettivo
Stima
COVID19 Campania
Ricoveri Ordinari
Ricoveri Ter Intensiva
Guariti
Giorno di F1 [2020]

INFLUXAPP: SISTEMA DI SORVEGLIANZA DELL'INFLUENZA STAGIONALE

Pubblicazione: 08-10-2019
Proponente: Regione Campania, Soresa, AORN - Ospedale dei Colli

Challenge promossa da Regione Campania, SoReSa e Azienda Ospedaliera dei Colli

Negli ultimi 20 anni l'influenza stagionale ha toccato il picco più alto. Attualmente esistono molti sistemi di sorveglianza, pochi però sono in connessione tra loro ed interattivi con il cittadino.

In un momento storico fondamentale per i cambiamenti climatici, obiettivo della challenge promossa da Regione Campania, SoReSa e Azienda Ospedaliera dei Colli è quello di creare un sistema di sorveglianza dell'influenza stagionale, sia smartphone che web based, che renda il cittadino "influenzato" parte attiva del sistema di monitoraggio stesso, potendo ricavare informazioni sui contatti avuti con altri individui potenzialmente contagiati o contagiabili, ingaggiandoli in una sorta di social network informativo epidemiologico.

Inoltre il sistema dovrebbe mettere in connessione tra di loro anche i cittadini e gli operatori sanitari, laddove sia richiesto eventuale intervento ospedaliero.

La challenge è proposta nell'ambito di hackathon, una maratona di sviluppo codice in cui sviluppatori, hacker, maker, esperti di IoT e appassionati di tecnologia si uniscono in team e, con l'aiuto di mentor esperti, sviluppano prototipi di progetti hardware e software, condividendo idee, creatività e accrescendo le competenze in modo innovativo e divertente.

Per ulteriori informazioni si rimanda al portale Open Innovation Campania.


thank
you