

and chest discomfort, and in severe cases dyspnea and bilateral lung infiltration <sup>6,7</sup>. Among the first 27 documented hospitalized patients, most cases were epidemiologically linked to Huanan Seafood Wholesale Market, a wet market located in downtown Wuhan, which sells not only seafood but also live animals, including birds, mammals, and wildlife <sup>4,8</sup>. According to a retrospective study, the onset of the first known case dates back to 8 December 2019 (REF. <sup>9</sup>). On 31 December, Wuhan Municipal Health Commission notified the public of a pneumonia outbreak of unidentified cause and informed the World Health Organization (WHO) <sup>9</sup> (FIG. 1).

By metagenomic RNA sequencing and virus isolation from bronchoalveolar lavage fluid samples from patients with severe pneumonia, independent teams of Chinese scientists identified that the causative agent of this emerging disease is a betacoronavirus that had never been seen before <sup>6,10,11</sup>. On 9 January 2020, the result of this etiological identification was publicly announced (FIG. 1). The first genome sequence of the novel coronavirus was published on the Virological website on 10 January, and more nearly complete genome sequences determined by different research institutes were then released via the GISAID database on 12 January <sup>7</sup>. Later, more patients with no history of exposure to Huanan Seafood Wholesale Market were identified. Several familial clusters of infection were reported and nosocomial infection was documented in health-care facilities. All these cases provided clear evidence for human-to-human transmission of the new virus <sup>4,12-14</sup>. As the outbreak coincided with the approach of the lunar New Year, travel between cities before the festival facilitated virus transmission in China. This novel coronavirus pneumonia soon spread to other cities in Hubei province and to other parts of China. Within 1 month,