Managing the COVID-19 pandemic: from a hospital-centered model of care to a community co-production approach

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Abstract

The COVID-19 pandemic is not only a crisis of intensive care but also a complex social and humanitarian crisis. It will continue to pose high risks until mass vaccination is undertaken. Meanwhile, control of contagion will rely on responsible behavior by citizens. Strategies for fighting COVID-19 in different regions of Italy have shown that a more balanced approach, which is area-specific and not just hospital-focused, pays off. This article goes further by proposing a community co-production approach and its potential benefits, in the light of discussions with politicians and key health decision makers and actors.

Keywords: COVID-19; health care; community co-production; community health, regional strategy

Introduction

COVID-19 is a highly transmittable and potentially fatal disease, declared a pandemic by WHO in March 2020. The focus of public policies has been on how hospitals cope, neglecting the potential roles of community action in containing infection, coping with the effects of social isolation, and helping people to recover from the disease.

Some characteristics make COVID-19 particularly apt for a co-production approach.

First, its ease of transmission threatens widespread incidence. The health care system can do little to help in this – communities themselves must self-organise to reduce the spread. Consequently, in this first pandemic year, preventing the spread of Covid-19 requires social, not medical, interventions. However, little of this has been recognized, co-ordinated or in any way supported by public sector health systems.

Second, soon after the initial virus outbreak, the anticipated high spikes in demand for hospitalization, and particularly for prolonged treatment in ICUs with scarce equipment, meant that a strategy of relying only on the acute health system was likely to have a high failure rate, as seen in several parts of Italy, Spain and New York state. This led eventually to building of temporary hospitals but in the first few months the main responses in many countries were to decant recovering Covid-19 patients from hospitals to the community as quickly as possible (often to ill-equipped care homes) and delaying hospital admissions of high needs patients with other serious (but non-infectious) conditions. Both of these responses placed a high burden on community-based public services, without any systematic attempt to co-ordinate or support the responses of these services.

Third, strong socio-economic patterns in the rates of infection and fatality from Covid-19 are evident (people with chronic health conditions, the elderly, the poor, men, and people from Black and Minority Ethnic (BAME) communities are more affected). This seems likely to be the result of different patterns of social contact, social behavior and socio-economic

disadvantage; consequently, the remedy lies in changing social behavior and experiences, rather than medical intervention.

Taken together, these factors make the pandemic a potentially fruitful area for a strategy of community co-production, taking up the challenge highlighted in a recent Special Issue of *Public Money and Management* (Bovaird et al. 2019).

Research aims and method

The aim of this article is to start a debate among policy makers, practitioners and academics on an inclusive approach to dealing with the COVID-19, based on the empowerment of communities and regional health systems and other public services that should complement the hospital-centric approach employed so far and should engage both medical and non-medical professions.

This article originates from two sources. First, it arose from our observation of what has happened in Italy, one of the most badly hit countries in the world. The Italian public sector response has generally been analyzed as a single strategy. However, this is misguided – in practice, the regionalized Italian healthcare system has allowed a wide variety of responses to the crisis, providing valuable comparisons. We identified some of these variations by analysis of official documents and public press statements.

Second, in March and April 2020 we interviewed 20 key respondents from public and non-profit institutions at the forefront of the fight of COVID-19 in Italy. These include interviewees from the National Federation of Doctors and General Practitioners, the Italian FEMA (Protezione Civile), the Medical Professional Association of Rome, the Red Cross, the 118 emergency system, the health director of a prison located in Milan, Doctors without Borders, health director of INMI Lazzaro Spallanzani - National Institute of Infectious Diseases, health director of Cristo Re Hospital in Rome, doctors at the Tor Vergata

University Hospital, the Head of a public health department in local health organization in Rome, the President and CEO of a non-profit organization providing social protection and social inclusion services in Milan.

A short semi-structured checklist guided the interviews, including questions on what interventions had been undertaken, what were the main weaknesses in these interventions, what might remedy these weaknesses, and how might community co-production help. The interview schedule was constructed, and the interviews were interpreted, in the light of existing theories on co-production in improving public services and public outcomes (Brudney and England 1983; Bovaird 2007; Cepiku and Giordano 2014; Loeffler 2016; Osborne et al. 2016).

National and regional strategies against the COVID-19 in Italy

Italy was initially one of the countries most hard-hit by the COVID-19 outbreak. National emergency status was declared at the end of January and a complete nationwide lockdown on March 22nd. At the time of writing, Italy accounts for 271,515 cases and 35,497 deaths, although these figures underestimate the reality[1].

The Italian government's response to the outbreak of the COVID-19 involved:

- enhancement of hospital capacity by a range of measures, including creating new COVID-19 facilities, increasing ICU and pneumology and infectious diseases beds, fast-track hiring of medical and nursing students, allowing retired healthcare professionals to return to practice, developing an inter-regional collaboration mechanism ('CROSS') and simplifying procurement regulations;
- lockdown of all non-essential activities, imposed partially and gradually;
- financial support to businesses and families;

[1] Ministry of health. Data on 2 September 2020. http://arcg.is/C1unv

- last, and unfortunately least, delegation to the 21 regions to organize assistance to citizens and to COVID-19 asymptomatic, mild or recovered patients.

"In the first phase of the emergency, the response to the pandemic completely neglected area-based assistance. Even in terms of communication, everything was focused on emergency services and hospital care", said the Secretary of the National Federation of Doctors and GPs. Unfortunately, this continued after the initial shock and despite the call of several medical associations. Moreover, community health systems lacked PPE for dealing with both COVID-19 and other patients, so that 61 of the 176 doctors who were COVID-19 victims were GPs[2].

When public comment started on the negative effects of neglecting community and home-based interventions, the government accepted a proposal from the National Federation of Doctors and General Practitioners. On March 9th, the regions were asked to create special units of care continuity (USCA) within two weeks. These were supposed to make it possible to reach patients at home at a time when GPs could not do so because of PPE shortages. Although some regions adopted guidelines recommending use of telemedicine, they typically provided few incentives (€40 per working hour). Our interviewees also reported reliance on newly graduated medicine students, many of whom needed to wait for instructions from permanent staff, who were already working close to maximum capacity. Consequently, this intervention was of limited effectiveness.

However, as regions in the Italian healthcare system retain some political, legislative and managerial autonomy, even during emergencies, regional responses varied significantly. Here we compare Lombardy and Veneto, two regions geographically close and hard-hit, but

[2] See https://portale.fnomceo.it/elenco-dei-medici-caduti-nel-corso-dellepidemia-di-covid-19/

pursuing very different strategies and achieving different outcomes (Bosa 2020; Zanini 2020).

The Lombardy case features seven mistakes in managing the COVID-19 crisis: no testing of people outside of hospitals; mismanagement of nursing homes for the elderly; no PPE for doctors working in the community (GPs, pediatricians, emergency doctors), which led to their deaths in many cases and also made them involuntary vehicles of disease diffusion; lack of public health actions (testing in the community of potential patients, isolation and testing of their contacts); and managerial failure to avoid saturation of hospital beds, so people who needed hospitalization were kept at home. In summary, "the disaster that was created […] is in large part to be attributed to the interpretation of the situation as an intensive care emergency, when in fact it is a public health emergency. Public health and community assistance have for a long time been neglected and depleted in our region" [3].

One interviewee, working for the 118 health emergency service in Milan, highlighted the plight of elderly people who, due to lockdown, had been abandoned by their usual in-home caregivers and family. Even with the greater reach of telemedicine, their GPs were unable to keep up with their health and social needs, which were unloaded onto the emergency service, which was consequently swamped. Moreover, she said: "we don't have data on what is happening in the city; we only know what's happening in hospitals. Enhanced community surveillance could provide a monitoring network of the trends".

Veneto implemented a very different strategy: health professionals and academicians were extensively involved in policy decisions to tackle COVID-19. Three key characteristics make Veneto's response distinctive (Zanini 2020; Zingales 2020):

[3] Letter from the Regional Federation of Doctors and General Practitioners to the Lombardy regional government: https://portale.fnomceo.it/fromceo-lombardia-nuova-lettera-indirizzata-ai-vertici-della-sanita-lombarda/?fbclid=IwAR3LJvtrSbHIploPbM9VN9vM1L2Ch7yAO8_eCOeA7pgnpwNbOFahTijX-V0

- Focus on home diagnosis and care, handled by a dedicated group of over 720 disease prevention specialists (who also perform regular check-ins with patients). This reduced the burden on hospitals and minimized the risk of COVID-19 spread in medical facilities.
- Extensive testing and active surveillance (tracing and isolation at home and in medical facilities), based on collaboration among hospitals, labs, and medical professionals deployed across the region.
- A hub and spoke network of dedicated hospitals for COVID-19 patients was established, which streamlined the process for intake and treatment, and reduced the risk of COVID-19 infections among medical staff and patients.

As well as avoiding the hospital-centric approach and making good use of its well-developed community health system, Veneto explicitly issued third sector organizations in its region with *Guidelines for volunteering activities in the framework of the epidemiological emergency of COVID-19*, approved on April 10. These emphasize strengthened collaboration between voluntary organizations and public institutions, both to attract new volunteers supporting public services and also to protect volunteers from infection. Local operational centres were created at local government level, where needs and priority intervention areas were identified, and local volunteers recruited, trained and provided with PPE. Finally, the seven existing service centres for volunteering acted as a link between volunteers and local councils during the COVID-19 emergency - mainly through delivery of food and masks, accompanying elderly people on urgent medical visits, staffing mobile units supporting the homeless and substance abusers, and providing psychological support by telephone (but also helping to recruit and train new volunteers for lockdown activities).

Veneto (which experienced its first death the same day as Lombardy) had a much slower growth of infections than the other main Northern regions (Figure 1). Its approach has the merit of blocking contagion in the communities and not simply in hospitals (Sadun et al. 2020).

A proposal for an alternative community – co-production approach to tackling COVID-19

The differentiated regional experiences in Italy suggest that an approach covering community- and home-based assistance is more effective than an approach exclusively focused on hospitals. However, our proposal goes a step further, given that community-based medicine is, by itself, clearly unable to address all the risks arising from COVID-19, which are likely to continue at least until mass vaccination is undertaken. A wider set of community-based interventions is needed, involving many public services, not just health care.

Moreover, it was always inevitable that lockdown measures would loosen over time, so that suppressing contagion will have to rely on prolonged socially responsible behavior and self-control by citizens. The health care system has little experience, or indeed understanding, of such behavior change by citizens.

Therefore, we propose an approach focused on the community level and based on strong collaboration between local health professionals from different disciplines, other public professions and local communities.

In line with our analysis above of the potential of co-production, “an autonomous community response has already started” according to the CEO of a non-profit organization operating in Milan. “Citizens have spontaneously organized in helping neighbors in need in bringing food and masks. They have detailed information on particular needs and act as sentinels in their

areas. There is a lot of willingness to help. We launched a call for 40 volunteers and received over 600 applications in a few days" (similar to the NHS appeal in March 2020 for 250,000 UK volunteers to help to deal with the consequences of Covid-19, which attracted 750,000 registrations in the first week).

These activities in the community make it clear that citizens are highly motivated to help each other in addressing their social needs. However, all our Italian interviewees agreed that a community contribution to health interventions could also help to tackle Covid-19, in close collaboration with doctors and nurses.

This discussion has highlighted that within co-production the main contribution so far from communities has been in co-delivery, rather than co-commissioning, co-design or co-assessment. However, it remains open as to whether this pattern will change, as communities (and, indeed, service users) become more experienced in dealing with the pandemic.

The move to a more community co-production strategy will involve major cultural, structural and resource changes in the current configuration of public services, particularly health and social care services. Our discussions with key informants from healthcare institutions and non-profit organizations suggest that much might be gained from developing large-scale co-production and other collaboration initiatives.

We invite the thoughts of our colleagues in academia and in public services on whether such a major strategic change is justified by the devastation already caused in these few months by Covid-19 – and, if so, how this transformation might best be implemented.

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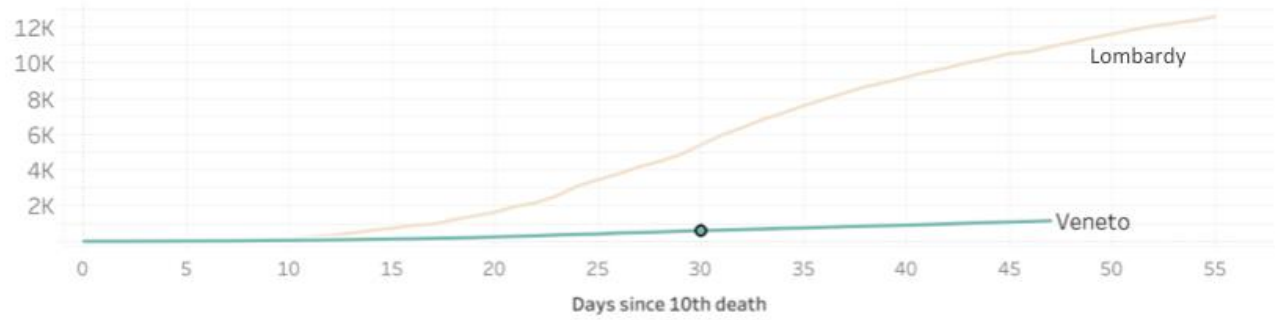
Figure 1: Total COVID-19 fatalities, days after 10° death: Lombardy and Veneto regions



Source: Zanini M. 2020, https://public.tableau.com/profile/michele.zanini#!/vizhome/ITALYCovid-19TrendsbyRegion/Summary