

# **Assessing relational coordination in the health sector: an experimental approach**

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Coordination is the key to the success of any organization (Webb, 1991). In the healthcare sector, departments with higher level of coordination result in greater promptness and quality of care and lower mortality rates. Sharing of codes of conduct and procedures has been shown to reduce postoperative pain and improve postoperative functioning (Argote 1982). For these reasons, enhancing coordination between health professionals is becoming central in many countries healthcare policy, including Italy (Romoren et al., 2011). However, despite the various attempts to encourage care coordination, Italian health sector continues to be characterized by a high level of fragmentation which led to a waste of 2,58 millions of euros in 2017 (Cartebellotta et al., 2019). Although Italy has developed a specific set of indicators to measure what is the current extent of coordination in the health sector, information infrastructure is not being utilised sufficiently, due to a missing link between different data and a poor use of the medical record (European Union Report, 2017). Thus, it becomes difficult to measure coordination inside the hospital. Therefore, the aim of this paper is to use a new approach, informed by cutting-edge research in behavioural economics, to tackle the lack of information about the extent and nature of miscoordination in the Italian healthcare system. To the best of my knowledge, this is the first study to investigate the level of coordination among the Italian health professionals. Moreover, I check whether physicians act according to national guidelines in the context of the hospitals of Reggio Calabria, by using a simple, and incentive compatible tool such as the coordination game (see e.g. Barr et al. 2018; Burks and Krupka 2012).

In order to detect whether a group of people share a common understanding of the practices and rules that apply to specific decision situations, Krupka and Weber (2008) adopted a special type of coordination game in which people are incentivized to “coordinate” with others in evaluating what constitutes “appropriate behaviour” in a given situation. A similar approach can be used here to investigate whether physicians coordinate facing the same scenario and whether they share the same protocols or guidelines to be applied to the specific clinical case.

By identifying areas where relational coordination plays an important role, I have chosen to focus on orthopaedics, paediatrics and oncology. For each of the aforementioned departments, I have designed a specific vignette (i.e., a description of a hypothetical situation which physicians could face on their job) written from the perspective of a physician facing a patient suffering from a particular disorder or

disease and a set of four actions (i.e. one of them set according to national guidelines) which a physician can take in response to that. In this framed field experiment, physicians were asked to indicate whether each of the four possible actions was ‘very inappropriate’, ‘somehow inappropriate’, ‘somehow appropriate’ or ‘very appropriate’ on a scale of one to four, so as to match the same judgments of their partner in order to obtain the reward.

Data show that the overall average of coordination (i.e. physicians suggest the same medical treatment for the specific circumstance) across the experiment is 35% and that men are more likely to coordinate than women. In particular, men declared to be more willing to share results of diagnostic tests or outcomes of surgical procedures with their colleagues and as a consequence coordination can benefit from this kind of brainstorming. Working in team as well as the presence of a leader in the team increases the probability that physicians coordinate. Moreover, the more important are national guidelines in physicians’ decisions, the less likely is coordination. The explanation is to be found in the rigidity of guidelines often said to be impractical to apply to individual patients and to limit physicians’ autonomy (Farquhar et al., 2012). Finally, results suggest that physicians who expressed higher level of job satisfaction are more likely to coordinate and implement the courses of action prescribed by national guidelines.

Evidence provided by this study shows that coordination in the Italian health sector could be missing, which makes the need for action all the more acute. Even though in recent years Italy distinguished itself for the initiatives aimed at promoting integrated care through the creation of networks and cooperatives between different health professionals for example in Emilia Romagna, Lombardy and Piemonte (European Union Report, 2017), there is still a lot to do. More generally, collaborations between general practitioners and specialists together with more formal integrated path among professionals belonging to different levels of care organizations should be encouraged to fight lack of coordination. Furthermore, since working in team is said to increase the level of coordination, teamwork should be incentivized through brainstorming and planning sessions. In this regard, leaders must be trained to be able to manage a team, facilitating collaboration and communication between different members. Moreover, since actions prescribed by national guidelines are judged as very appropriate in 48% of the cases, training courses specifically addressed to the dissemination of guidelines should be introduced with more frequency in order to increase such percentage. Since the experiment addresses an increasingly discussed topic, and given the already interesting results it could be worth it to replicate it, adding other possible vignettes. For example, additional vignettes could be designed in order to represent scenarios where different subjects (e.g. physicians and nurses) are involved in the situation and have to make a decision. This could allow to measure coordination

between people who are in the same medical team or in different teams, and among people who are at the same or different level of the organization (e.g. nurses evaluating a nurse or a physician). Also, access to hospital data could help identifying areas which require greater intervention in terms of coordination and for which further scenarios and so vignettes could be imagined.

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