

## Questioning the Cost-Benefit Ratio of the Telecardiology Service in the State of Minas Gerais

Lidiane Pereira dos Reis Barros, Antônio Carlos de Camargo Carvalho, Euclides de Moraes Barros Junior  
Universidade Federal de São Paulo, São Paulo, SP - Brazil

### Dear Editor,

Considering the economic aspects approached in the article Cost-benefit of the telecardiology service in the state of Minas Gerais: Minas telecardio project<sup>1</sup>, we would like to ask some questions related to the subject of the article.

Regarding the costs related to the physicians writing ECG reports, the authors have informed that the cardiologists who analyze the ECGs take turns in shifts to cover the entire state

of Minas Gerais. The cost of those professionals, however, has not been informed in the analyses performed in that article.

Another important factor not specified in that article is whether all elective and emergency exams are sent to the reference centers for ECG report. The answer to that question also influences the costs approached in the article.

In addition, we would like to consider the possibility of creating a single center for ECG report instead of its distribution in the five universities as reported in that article. Was that alternative considered to reduce costs in the feasibility analysis?

It is worth noting that those questions do not diminish the positive impact of the project. On the contrary, its merit is evident. We aimed at helping refining the cost informed to enable its comparison with other solutions available in the market.

### Keywords

Telemedicine/economies; cost benefit analysis; Brazil.

### Mailing Address: Lidiane Pereira dos Reis Barros •

Lidiane Pereira dos Reis Barros - Rua Tabor, 491, Apto. 194 A, Ipiranga.

Postal Code 04202-020, São Paulo, SP - Brazil

E-mail: lidianeprb@gmail.com

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### Reference

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### Response letter

We thank your 'letter to the editor' regarding our article *Cost-benefit of the telecardiology service in the state of Minas Gerais: Minas telecardio project*, and would like to clarify the three issues raised about the project.

The first considers the costs related to the medical services for writing ECG reports. The cost of the cardiologists acting in the reference centers at the five universities was categorized as third party services, included in Maintenance Expenses. The professionals were paid per shift, according to the wage policy of the Hospital das Clínicas of the Universidade Federal de Minas Gerais.

Regarding whether an ECG report would be written for every emergency and routine ECG, a fact that might

influence costs, we inform that all ECGs were analyzed and a report was written, although the flows of routine and emergency cases differ<sup>1</sup>. In emergency situations, the ECG is performed immediately at the municipality, transmitted to the Telediagnosis Center, preferentially analyzed by the cardiologists on duty, and returned promptly to the municipality in-need, usually within less than ten minutes. The reports on routine ECGs follow a first-in first-out policy, all being analyzed and their reports returned to their respective municipalities on the same day, respected our working hours.

Last but not least, the possibility of creating a single center for ECG report instead of its distribution in the five universities has not been considered to reduce costs, because it contradicts the network concept proposed in the program.

One of the pillars of the Minas Telecardio project was the creation of a telecardiology service network, strengthening and consolidating the university hospitals, which are reference centers in each region of the state. From the economic viewpoint, centralization would not cause a significant reduction in costs, because the coordinating center centralizes the technological infrastructure, and, because the clinical care is totally virtual, the geographical location of the cardiologist does not matter. Decentralization does not imply an increase in the number of physicians (an important cost item), because the service offered is not region-specific, the physician on

duty responds to any municipality in-need. The exams are received in a centralized way at the coordinating center, and the information technology system distributes the exams between the physicians on duty. With the development of the program and its expansion to more than 600 municipalities in 2010, a quality control system was instituted, based on systematic auditing of ECG reports, to guarantee uniform and accurate analyses<sup>2</sup>.

Sincerely,

Antônio Luiz Pinho Ribeiro

### References

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