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Abstract

Timely manners – some epistemological issues in translational medicine

One philosophically neglected aspect of current practice in medicine is the promise of speeding up of the research and development process, most explicitly present in translational medicine (see Zhang *et al.* 2014: 465). Biomedical research, including both the development of drugs and therapeutic practices, is especially dedicated to time-sensitive outcomes. In recent years, translational medicine is an emerging approach supposed to bridge the gaps between laboratory, clinics, guidelines, practices, prevention, and finally, health politics. The idea is to make research more end-users centred, translating it into clinical practice and health politics in a more productive and patient-sensitive way, while maintaining rigour on the safety part.

I focus on three time-related issues in current translational medicine: (1) unintegrated strategies in early drug discovery (2) translational time lags and problems with their measurement, and (3) time-insensitivity in measuring the effectiveness of medical interventions. I suggest that *synchronicity* is the key feature of a desirable "speedy" or "time-sensitive" translation.

(1) Methods in early drug discovery are based broadly on either the interventive complexity or the systems complexity, where each has considerable success but their merging seems to be a matter of coincidence or a lucky guess (Adam 2011). This kind of shortcoming cannot provide for a reasonable speeding up of the process, unless in terms of optimizing the chances for coincidences, lucky on both effectiveness and safety.

(2) Measuring translational lags between different translations along the process (from basic to clinical research, from clinical to practice and guidelines, etc.) has been attempted but has seemed to fail in its promise to be informative to the stakeholders and decision makers because of different methodologies used in measuring, ultimately, different things (Morris *et al.* 2011). Unified models for measuring translational lags and transparent endpoints of the translations might help elucidate the optimal practices.

(3) Finally, measuring the effectiveness of medical interventions is another highly time-sensitive practice, since not every condition has the same time span of development, remission, and possible relapse. The same holds for testing for safety and efficacy, and monitoring for side effects in drugs (Stegenga 2015). Time-insensitive instruments and methods can contribute to an overestimation of the effectiveness of medical interventions.

To exemplify these problems I analyse a paradigmatic example of translational research, the research on adrenals which eventually led to discovery, synthesis, and therapeutic application of cortisone. Though it took place before the formalization of translational procedures, it is important to highlight what is so paradigmatic about this case and how it relates to current translational practice. I argue that the efforts to tactically speed up the development of new drugs and therapies have only limited success, unless speeding means synchronising.

References

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