

Transfusion safety from the viewpoint of a musical quintet

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Dear Sir,

The former paradigm in transfusion safety was centred on the risk of infections, but this risk is now chiefly restricted to high infectious risk/high poverty areas, and/or linked to human activity, global warming and globalisation¹. While no longer the major threat, the remaining infectious risks necessitate strict vigilance programmes, a strategy that now appears to be shared with societal and political stakeholders. Within the new paradigm in transfusion safety, the cornerstone has become a secure supply, to ensure that a robust blood component inventory is built -based on patients' needs- and that the products are distributed according to high quality standards, which comprise constant controls, traceability, surveillance and reporting. While a *quintet* in chamber music is an exceptionally harmonic, organised group of five instrumentalists, more prosaically it is any set or group of five persons and things. The five instruments forming the *quintet* of transfusion safety are as follows. 1) Patient-driven blood supply², often referred to as inventory, is the *lead* of the *quintet*, but not its *soloist*. 2) Infectious risk monitoring, which remains central but is now also monitored by mass media, meaning that no mistakes are admitted (the note out of time or tune is an immediate scandal, and yet when this instrument plays right, it just does what it is expected to do and draws no applause: *applause* and *bouquets* are offered to Quality Assurance, the near *diva*). 3) Immunology is an ornamental instrument - the most precious and sophisticated one: both the *tessitura* and extensiveness of its range can be appreciated. Besides issues related to immunisation and best possible matches, it produces *sharps*, *flats* and *naturals*, which actually tone inflammation (pro- and anti-). Immunological safety is perhaps the most sophisticated pillar and guarantees efficacy of the transfused product (both short- and long-term efficacy: the "*blue note*")³. 4) Ethics is the *loud-voiced instrument*, always surprising because it sings differently in distinct places, as it is based on philosophy and moral principles, with cultural flavour. It should be driven -or at least directed- by society⁴. When it is out of tune, it sounds unpleasantly like echoes: in the *orchestra*, it is the *beat*. 5) A few

years ago, the *quintet* was a *quartet*; the added, "*you play for me*" instrument, "Patient Blood Management"⁵, is a novel concept that picks up again the patients' interests (formerly called "Transfusion Medicine"). As a new player, should PBM have to adjust to the other four instrumentalists or the other way around? Recent evidence seems to favour the latter option and ongoing studies will bring a more complete answer.

In aggregate, the beauty comes from the *harmony*; if transfusion safety becomes a *sextet*, the harmony will still prevail. As long as there are sickness and disease, *music*, *harmony* (which, in medicine and physiology, is referred to as "homeostasis") and patients' safety are essential; transfusion may not last forever but at the time being, it is essential and as such it must be safe along the whole supply chain, from donors to patients.

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References

- 1) Schmidt M, Geilenkeuser WJ, Sireis W, et al. Emerging pathogens - how safe is blood? *Transfus Med Hemother* 2014; **41**: 10-7.
- 2) Folléa G, on behalf of the Council of Europe Working Group and ISBT Working Party on Blood Supply management. Blood supply management (RBC): definitions, description as a process, tools for assessment and improvement. *ISBT Science Series* 2013; **8**: 37-40.
- 3) Delaney M, Dinwiddie S, Nester TN, Aubuchon JA. The immunohematologic and patient safety benefits of a centralized transfusion database. *Transfusion* 2013; **53**: 771-6.
- 4) Tissot JD, Garraud O, Lefrère JJ, Osselear JC. Ethics and transfusion medicine. In: Rainhorn JD, El Boudamoussi S (editors): *Globalization and Commodification of the Human Body: a Cannibal Market*. Paris: Fondation Maison des Sciences de l'Homme [in press].
- 5) Leahy MF, Roberts H, Aqif Mukhtar S et al; on behalf of the Western Australian Patient Blood Management Program. A pragmatic approach to embedding patient blood management in a tertiary hospital. *Transfusion* 2014; **54**: 1133-45.

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