The investigation of determinants that impact the diffusion of innovative health technologies:
An empirical analysis

Rosanna Tarricone
Building up EHTI Research agenda

- **EHTI Phase 1:** investigated the impact of DRG tariffs on the diffusion of Drug Eluting Stents in Italian hospitals located in nine regions (Cappellaro et al., 2010).

- **EHTI Phase 2:** investigated the role of financing mechanisms based on DRGs on the diffusion of new medical devices in Italian hospitals:
  → qualitative analysis of semi-structured interviews to regional and hospital managers.

- **EHTI Phase 3:** *empirical quantitative analysis of primary and secondary data* to investigate the determinants of uptake and diffusion of innovative medical devices
  → robust quantitative analysis currently lacking in the literature.
Aims and objectives

- The aim of the research is to explore what are the main determinants driving the diffusion of innovative medical devices in the Italian hospital sector.
- The final objective is that of identifying the main variables that impact the diffusion at different levels of analysis:
  - **Patient** level (e.g. age, place of residence, complications and comorbidities, principal and secondary procedures performed)
  - **Hospital** level (e.g. dimension, volume of activity, presence of emergency department, teaching status, ownership, urban location)
  - **Regional** level (e.g. structure of the regional healthcare system, type of reimbursement, additional payments on top of DRG rates, special funding for cost-outliers, existence of HTA and special procurement policies)
  - **National** level (e.g. reference pricing).
Methods and scope

- **Literature review** on the diffusion of innovation in general terms for setting up the theoretical framework of the determinants to be addressed in the quantitative analysis.
- The subsequent **comprehensive data collection** will be focused on specific medical devices (object of investigation) and will rely on different sources at National, Regional and hospital level.
- **Focus of the research**
  - **Innovative** medical devices, introduced in the clinical practice in the last 2-3 years
  - 2-3 cases (medical devices) preferably in different therapeutic areas
  - Scope: Italian NHS (all 21 regions).
Ultimate goal

- To determine the key determinants of technological innovation uptake and diffusion.
- To measure the impact of public policies onto management processes and patients’ access to innovative care.