INSTITUTE FOR HEALTHCARE IMPROVEMENT

Institute for Healthcare Improvement
90-Day Research and Development Process

Why Test a New R&D Process?

The Institute for Healthcare Improvement (IHI) needed to create a quick way to research innovative ideas and assess their potential for advancing quality improvement. The new method was designed to produce innovation in a reliable and efficient manner, bringing new ideas to action. IHI created a small team with dedicated resources to test a new process — what we refer to as a 90-Day R&D Project — to deliver on this objective. This small team, known as the IHI R&D Team, begins at least five new projects every 90 days. Projects are selected by IHI's senior team, including the Senior Vice Presidents, CEO, and COO, based on IHI's strategic plan and customer needs and suggestions.

Foundation

The 90-Day R&D Project is based in part on Proctor and Gamble's innovation method (Huston L, Sakkab N. Connect and develop. *Harvard Business Review*. March 2006:58-66). IHI's engine for research and development, using the 90-Day R&D Project, has the following characteristics:

- A specific question that needs to be answered;
- A charter that clearly states a problem;
- A network of innovators, along with other traditional methods (e.g., a literature search, prototype testing), to find answers to the problem described in the charter;
- A specific time frame for investigation, in this case 90 days (in some cases, less than 90 days if the project is smaller or the potential is unclear); and
- A decision at the end of 90 days that can include a recommendation to launch a new program, integrate content into an existing program, hold on additional development, or run another R&D Project if further investigation is needed.

Components of an IHI 90-Day R&D Project

Every 90-Day R&D Project is divided roughly into three phases:

- Phase I (Scan): The initial 30 days of the project is spent scanning the literature and conducting key interviews with relevant individuals in organizations, both within and outside of health care, to determine the current landscape — to understand all the dimensions of the problem or issue. At the end of this 30-day period a solid charter is produced, including the aim of the project, a description of the current landscape, a set of theories for how to solve the problem, the specifications for an effective solution, and an annotated bibliography.

- Phase II (Focus): The subsequent 30 days is spent testing theories at the front line and refining ideas about what actually works — that is, enlisting health care organizations as prototype sites to help test and develop ideas.

A key activity at this stage is describing the key components of the system that perform "to specification." A goal of this phase is to transition from an early theory about how a new idea works (descriptive theory) to a tested and detailed understanding (normative theory) as described by Carlile and Christensen in *Practice and Malpractice in Management Research* (see Appendix A). IHI believes that one way to make this transition is to create a driver diagram (see Appendices B and C). A driver diagram is a kind of tree diagram, a tool to conceptualize an issue and its system components. The diagram also helps to demonstrate a pathway to achieve the desired outcome. At the conclusion of this phase of work in the 90-Day R&D Project, the charter is updated with a list of contacts, people with experience testing in the area, and outcomes of tests.

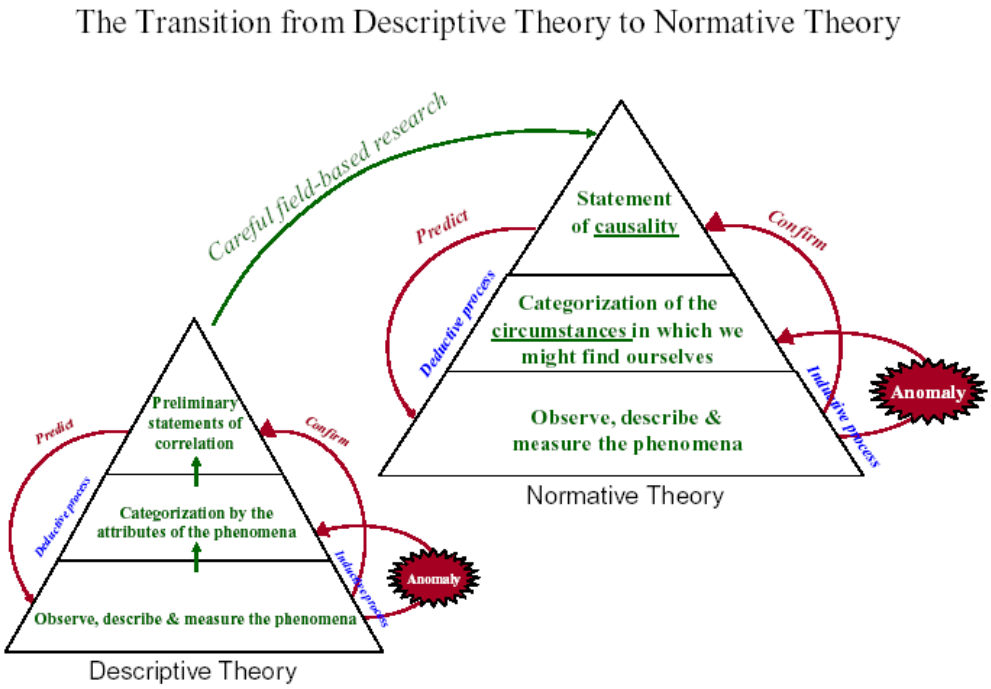
- Phase III (Summarize and Disseminate): The final 30 days are spent concluding tests, summarizing lessons learned, preparing a final report, and identifying appropriate dissemination products such as IHI programs and publications. The IHI R&D Team also prepares the handover of information gleaned during the project to others for the development of new programs, integration into existing programs, or conduct of a further R&D Project.

A general process map of a 90-Day R&D Project is shown in Appendix D. Each project has a leader and co-leader. Throughout the 90-Day R&D Project, the project team reports their progress to and receives feedback from the larger IHI Innovation Group that includes the IHI R&D Team, members of the IHI senior leadership team, and faculty. Innovation is deeply embedded in IHI's strategy, and IHI leaders carefully attend to the linkages among the Innovation Group, the senior leadership team, and the front-line improvers who provide both testing sites and are consumers of R&D projects.

Appendices

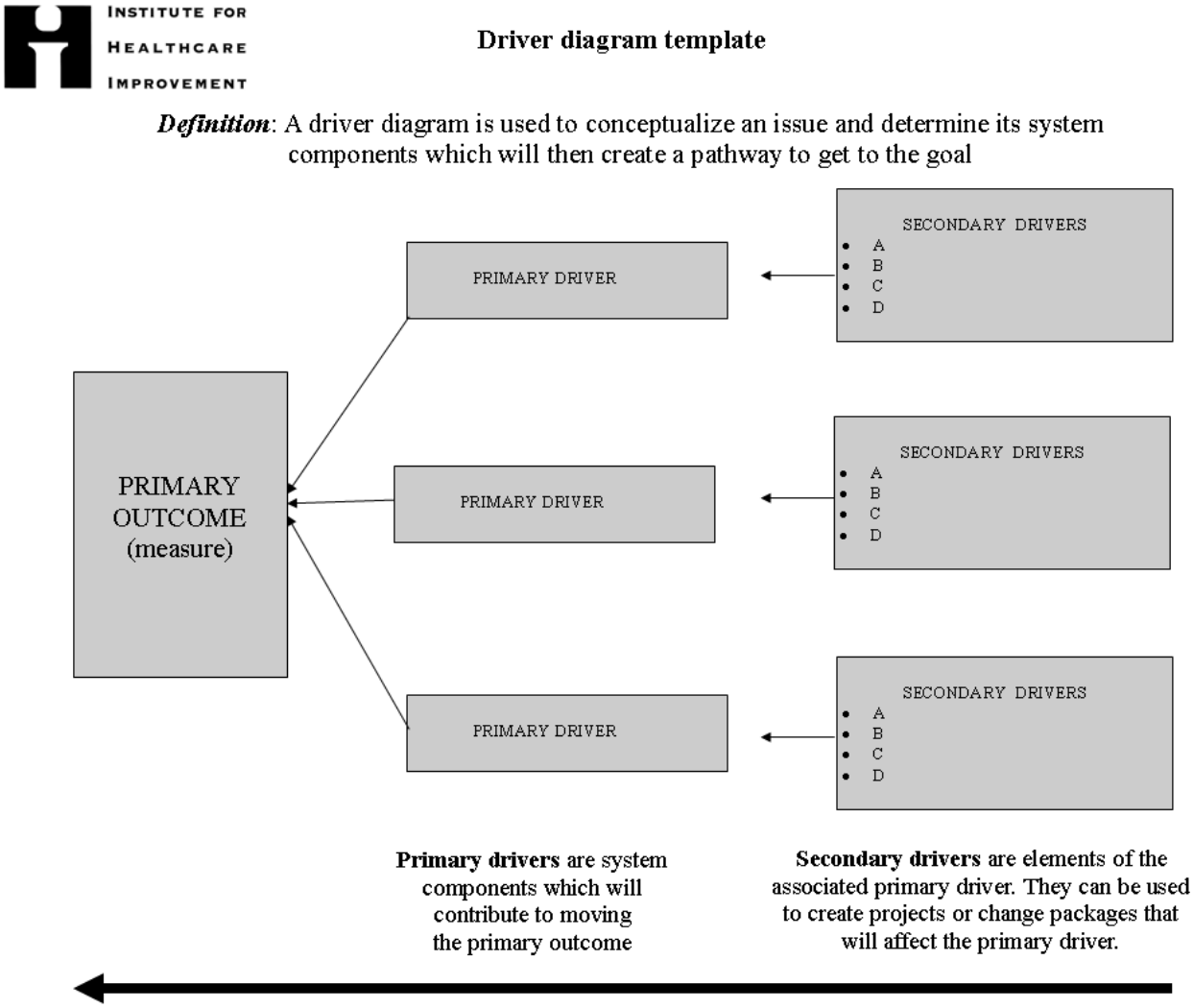
Appendix A: The Transition from Descriptive Theory to Normative Theory
Appendix B: IHI Driver Diagram Template
Appendix C: Example of a Driver Diagram
Appendix D: Generic Process Map for IHI 90-Day R&D Projects

Appendix A: The Transition from Descriptive Theory to Normative Theory



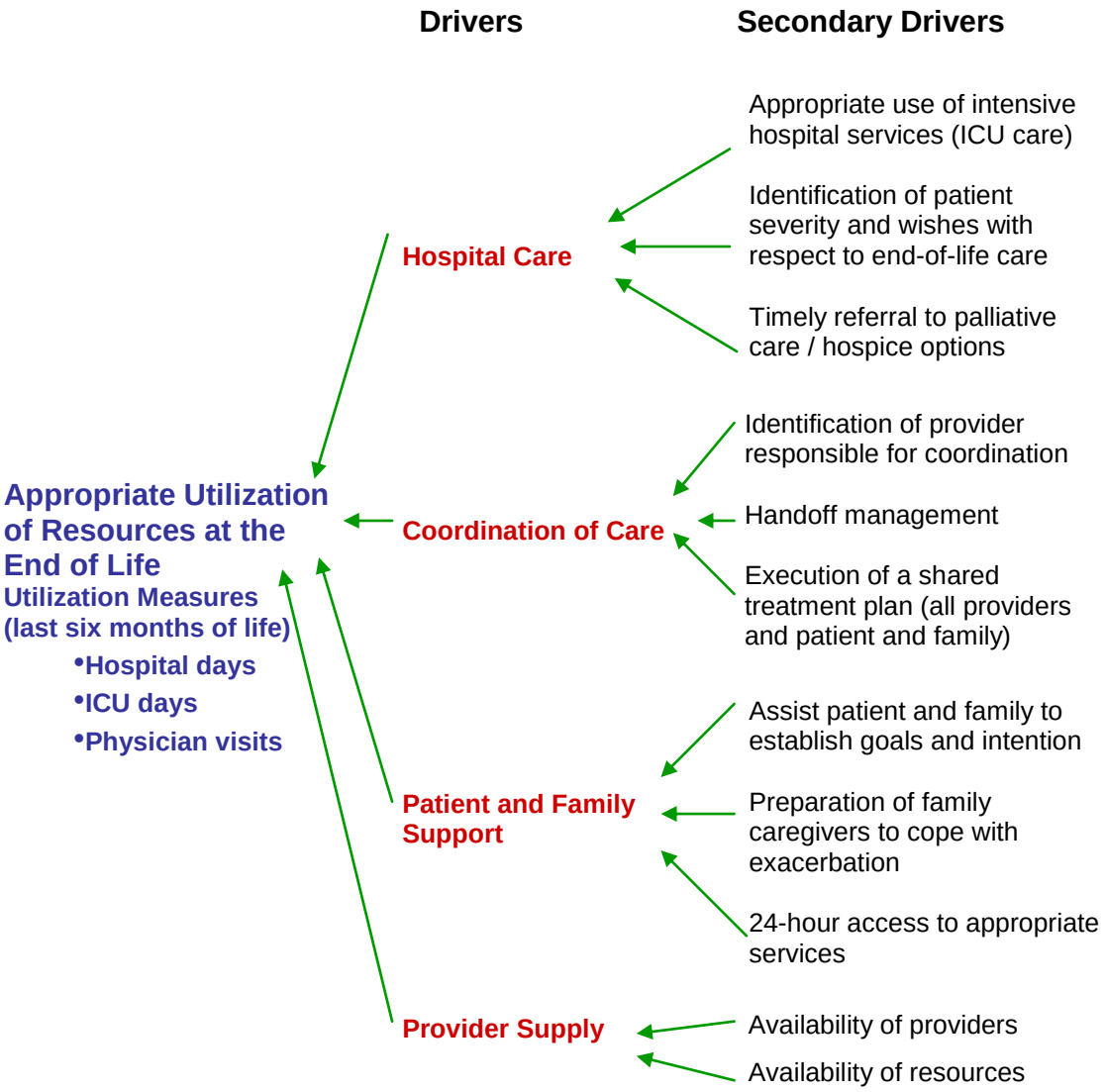
Source: Carlile PR, Christensen CM. *Practice and Malpractice in Management Research*. January 2005. Online information available at http://deming.ces.clemson.edu/pub/den/files/theory_paper_final_jan_06.pdf.

Appendix B: IHI Driver Diagram Template



Appendix C: Example of a Driver Diagram

This driver diagram was developed as part of the IHI 90-Day R&D Project on resource utilization at the end of life (as measured by several *Dartmouth Atlas* measures).



Appendix D: Generic Process Map for IHI 90-Day R&D Projects