Chapter 12
Ethically Building Business Intelligence in Healthcare: A Value–Sensitive Perspective

Majid Dadgar
University of San Francisco, USA

K. D. Joshi
University of Nevada, Reno, USA

ABSTRACT
This chapter advocates the use of a value-sensitive design (VSD) approach toward deriving patient intelligence by illustrating that the insights provided by the healthcare data that captures patients’ concerns, needs, and desires—known as values—provide more sustainable care. Authors examine three cases extracted from top information systems (IS) peer-reviewed journals in which medical data is collected and analyzed and in which intelligence is derived through a VSD framework. VSD is a three-part methodology that comprises conceptual, empirical, and technical investigations. This chapter investigates the value sensitivity of the following key activities and tasks that result in intelligence from data: data collection, data analysis, and data reporting.

INTRODUCTION
Advanced information and communication technologies (ICTs) designed and employed in the healthcare sector support and automate the activities that are required during the care process (Cortez, Cohen, & Kesselheim, 2014). Patients are more and more frequently participating in the care process enabled by these
ICTs (Bardhan & Thouin, 2013). As such, we argue that disruptive ICTs must be adaptive to each patient’s needs, desires, and concerns in order to become effective tools. Data generated and employed by these technologies and systems is processed and analyzed to provide insight into and intelligence about the patient care process. Healthcare providers recommend clinical treatments based on the system’s generated and obtained patient data. We believe such data must capture patients’ needs, desires, and concerns (i.e., human values), otherwise the medical recommendations become incomplete and the ICTs used during the care process become ineffective. In order to ensure patients’ human values are captured, data collection, analysis, and reporting should be sensitive to these values.

There is a gap between the knowledge and practice of ethical responsibilities in the complicated care process that provides health care, treatment, and service for the patients (Concannon, Gillibrand, & Jones, 2019). Healthcare providers and healthcare data workers collect and analyze healthcare data during the care process to gain insight into the patient’s care and treatment. We believe it is the ethical responsibility of the healthcare providers and scholars to ensure the intelligence gained from healthcare data is ethically derived. This chapter’s objective is to introduce a value-sensitive perspective to derive insight from healthcare data that captures patient’s concerns, needs, and desires (Friedman, 1997). We examine three cases extracted from top information systems (IS) peer-reviewed journals in which medical data is collected and analyzed and in which intelligence is derived through a value-sensitive design (VSD) framework (Friedman, Kahn, & Borning, 2008). VSD is a three-part methodology that comprises conceptual, empirical, and technical investigations. In this chapter, we investigate the value sensitivity of the following key activities and tasks that result in intelligence from data: data collection, data analysis, and data reporting.

BACKGROUND: HEALTHCARE DATA & ETHICS

Healthcare ethics primarily involves policies, regulations, guidelines, and activities to ensure ethical and professional conduct and providing medical and social benefits (Concannon et al., 2019). Healthcare data is collected from multiple sources to be used by different stakeholders for different purposes. The healthcare data collected to improve patients’ care should take into account patients’ values in forms of feelings, needs, and desires. It is the ethical responsibility of those collecting, analyzing, and reporting patients’ healthcare data to ensure that the patients have a say in the process. The intelligence derived from patients’ data for their care and treatment, should be sensitive to their values and not just focus on clinical outcomes. The patients’ intelligence will be more congruent with ethical considerations if the
Impact of Lean Supply Chain Management on Operational Performance: A Study of Small Manufacturing Companies
www.igi-global.com/article/impact-of-lean-supply-chain-management-on-operational-performance/126830?camid=4v1a

Enterprise Information System and Data Mining
Kenneth D. Lawrence, Dinesh R. Pai, Ronald Klimberg and Sheila M. Lawrence (2012). Organizational Applications of Business Intelligence Management: Emerging Trends (pp. 228-235).
www.igi-global.com/chapter/enterprise-information-system-data-mining/63977?camid=4v1a