

# What is Health Informatics?

## A Study of Pharmacy Student Perceptions

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### INTRODUCTION

- Use of technology in pharmacy practice requires that graduates understand health informatics.
- Concepts of health informatics have been integrated into accreditation standards.
- There is limited literature describing how students understand these concepts.

### OBJECTIVE

- Determine how pharmacy students define and conceptualize the term “health informatics”.

### METHODS

- Observational educational research study
- Observation period: Spring 2014 – Spring 2023
- P1 – P3 students enrolled in an elective health informatics course were asked the following question at the start of the course:

What does health informatics mean to you?

### Qualitative Content Analysis

- Independently coded by two researchers using open and in vivo coding.
- Similar responses were grouped into broader categories.
- Finalized themes were developed via researcher consensus and re-applied to all student responses.
- Descriptive outcomes were presented as frequencies and percentages.

**Most pharmacy students have a basic conceptualization of health informatics, indicating a need for more in-depth education about this important aspect of practice**

### CONTENT ANALYSIS

#### Data Management, Information Use and Communication

Data and how it is maintained, shared and used to support individual, system, and/or population level outcomes

Gathering, processing, analyzing health information using technology. Anything from analyzing large population data to identify trends, or using technology to improve patient safety (e.g., identifying drug interactions).

#### Software, Hardware and Technology as a Tool

Computer systems and/or programs used across various health care settings

I think of electronic health records, pharmacy software, PBM software, telehealth, the use of robotics in dispensing, using technology to make clinical decisions and more.

#### Patient Safety and Outcome Optimization

The use of technology to protect patient safety and ensure appropriate health outcomes

Health informatics involves using the available resources, both technology and human related, to help ensure that patients receive the highest quality of care possible.

#### Unclear and/or Mixed

Responses that did not fit into a specific theme due to lack of specificity

I think health informatics is about learning how technology can benefit us being health care workers and how we should use the technology we have now to help our patients the best that we can.

### RESULTS

Theme	Student Responses (n = 216)
Data Management, Information Use and Communication	36%
Software, Hardware and Technology as a Tool	31%
Patient Safety and Outcome Optimization	18%
Unclear and/or Mixed	13%

### KEY TAKEAWAYS

- Given that this encompassed students in their P1-P3 years and of varying work experience levels, students demonstrated a fairly rudimentary knowledge of informatics.
- With the increased focus on addressing digital health in pharmacy education, this study provides insight into where to start in the purposeful design of learning activities.
- Limitations include students from a single pharmacy program and no sub-analysis by year in program.
- Future studies should seek to develop and assess the impact of specific informatics activities for a variety of student levels.

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