

Systems Development Life Cycle Program Transcript

The future of the healthcare field lies in technology and the greater efficiency, quality, and cost effectiveness it can provide. However, successfully integrating technology can be a major challenge. Many healthcare organizations experience difficulty in trying to incorporate informatics and innovations into preexisting processes. The systems development life cycle (or SDLC) can help to address this by providing a series of steps for integrating new systems to support current practices. The SDLC is an overarching term that describes a cyclical process of steps that can be tailored to unique needs and goals. There are many different SDLC models that can be applied to different situations and different types of technology systems. While no two SDLC models are exactly alike, most of them include similar steps for implementing new technological systems.

Depicted in the graphic are the six main steps of an SDLC model.

1. Plan: Assess the needs that the system should address

The goal of this first phase is to conduct a preliminary analysis, propose potential solutions, describe costs and benefits and prepare a plan with recommendations. In this phase, it is important to outline organizational objectives and scope of the problem under study.

2. Analyze: Analyze specifications for the system

The goal of this phase is to outline project objectives into defined functions and operation of the intended application. It is the process of gathering and interpreting facts, diagnosing problems and recommending improvements to the system. This phase also reviews end-user needs and removes any inconsistencies and incompleteness in these requirements.

3. Design: Design, develop, and test the system

The goal of this phase is to describe desired features and operations in detail, including screen layouts, business rules, process diagrams, and documentation.

4. Implement: Implement the system

The goal of this phase is to bring all the pieces together into a designated testing environment, checks for errors, bugs and interoperability. Once this is completed, end-users can begin the testing process for usability.

5. Maintain: Support the system operations and users

The goal of this phase is to assess the system to ensure it does not become obsolete. This is also where changes are made to initial software. It involves continuous evaluation of the system in terms of its performance.

6. Evaluate: Continuous cycle of evaluation of the SDLC process.

This final phase is a critical step in keeping the cycle moving and assessing changes to keep the process on target with the desired outcome. This is where the system that was developed, as well as the entire process, is evaluated. Some of the questions that need to be answered include: Does the newly implemented system meet the initial business requirements and objectives? Is the system reliable and fault-tolerant? Does the system function according to the approved functional requirements?