# The Implementer's Workbench: Incorporating Site-Specific Factors into Clinical Decision Support Rules Using an ArdenML Framework

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# Introduction

- Clinical Decision Support (CDS) technologies have demonstrated their ability to favorably impact healthcare. However, efforts to make CDS components widely available in the medical workplace have not resulted in broad adoption. A key challenge is support to customize existing knowledge or to transfer proven medical logic from one institution to another.
- An important part of this challenge derives from the desire, on the part of institutions seeking to reuse medical logic modules (MLMs) from other institutions, to configure parts of these MLMs to fit local conditions. These local conditions may derive from various sources:
- Difference in threshold values for a logical comparison.
- Added restrictions that are thought important to maintain local applicability.
- Differing logic triggering mechanisms.
- Other site-specific refinements.
- We refer to these as "Site-Specific Factors (SSFs)".
- The portability of computable medical knowledge has been an Informatics goal for two decades. It is the focus of numerous research efforts and of the HL7 standard known as the Arden Syntax for Medical Logic Modules.
- As a part of continuing efforts to reduce the barriers to CDS portability, we are developing an MLM authoring and editing tool with a focus on We call it the "Implementer's SSFs. Workbench.'

# Goals:

- Develop a knowledge authoring environment where **SSFs** can be readily incorporated into developing MLMs
- Author MLMs in an XML-based representation language capable of transformation into other forms for review and execution.
- Support MLM logic testing, transformation for display and execution, and authoring using alternate representation languages of varying complexity.
- Integrate authoring system with ontologies. Use these to define data models and to detail functional characteristics of logical operators.

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