The goal of this project is to **identify the most effective integration strategy** for Shadow Health Digital Clinical Experiences, as **supported by current research**.

The goal of this project is **not to restrict the range of choices** an instructor can make when integrating a Shadow Health simulation. However it is intended that, as a result of this use case, we **restrict the range of options we suggest** to faculty in our prepared training materials and support literature.
Present Solutions

With the validation of the Shadow Health clinical reasoning framework, and introduction of the subsequent Student Performance Index, instructors have an overall score, and a contextualized DCE score, from a set of valid and reliable instruments that they can use for assessment and grading purposes.* Current research also documents the most effective ways to use virtual patient simulations in health professions curriculum. This has allowed for the development of a Shadow Health Recommended Use Case.

*However, it should be noted that documentation and self-reflection are currently not scored (and self-reflection never should be), although they are part of the Shadow Health Clinical Reasoning Framework.
Creation of the Recommended Use Case

The Instructional Design team examined peer-reviewed literature for documented best practices with virtual patients in health professions education, in order to craft an evidence-based integration strategy that highlights benefits of virtual patient simulations, the unique value of the Digital Clinical Experience, and the effectiveness of the Student Performance Index.
Literature Review

A summary of best integration practices is included in the **Recommended Use Case** document. The results of this research included:

- The value of using virtual patients includes critical self-reflection, validated skills development and assessment, and the development of clinical reasoning, clinical decision-making, plan-making, and communication skills, through deliberate practice and repetition of skills within an active learning framework.
Literature Review (cont.)

- The learning framework should consist of self-paced formative experiences within in-depth patient cases with a narrative focus, flexible learning with multiple solutions, context for situated cognition, transparency of performance and assessment, multiple scenarios, and the promotion of questioning and rationales.

- The virtual patient assignments themselves should include a pre-brief, initial motivation (e.g., framing from faculty, video with emergency case scenarios), data collection, question-asking, written rationales, practice with prioritization, and instant feedback.
Introduction of Recommended Use Case

After reviewing the research, one evidence-based use case emerged. However, based on current faculty practices, the recommended use case was also altered to produce two modified versions for lab pass and flipped classroom models. The recommended use case is intended for:

- Health Assessment / Advanced Health Assessment products
- Theory / Lab curricula
- Face-to-Face / Online delivery
- BSN / RN-BSN / All graduate levels
- Modified Cases
  - Lab Pass
  - Flipped Classroom
Faculty provide an introduction to Shadow Health for their students
  ● Expectations of performance
  ● Grading (e.g., academic weight)
  ● Value

SH assignments are sequenced
  ● After didactic activities
  ● Before lab or clinical practicum
  ● Correspond to skill-specific content throughout semester (e.g., SH HEENT assignment be assigned in HEENT unit)
Recommended Use Case (cont.)

- SH assignments are used as formative assessment (a *formative* assessment being defined as assessment of content knowledge and performance informing teaching and student progress in contrast to summative which evaluates outcomes for external accountability)
  - One submission
  - No reopening (unless remediation needed)
  - No findings filtered
- Focused exams should be used for deliberate practice after their respective system assignments (e.g., Cough Focused Exam with Danny Rivera after Respiratory with Tina Jones)
  - Alternative possible use: All focused exams are used as summative assessment at the end of the semester
- Comprehensive Assessment is not used
- Not time-limited
Recommended Use Case (cont.)

- Self-reflection prompts are used
  - With the exception of Hallway, post-exam activities are optional and not encouraged
- Each assigned simulation is graded
  - Based on normalized score
  - Not pass/fail
  - Documentation is not generally recommended as a graded component
  - Self-reflection should be assessed and commented on, but not graded
- Instructor feedback should be provided as coaching and remediation both within the SH system, and in class / lab discussions
- Physical Examination Plus is used for all levels above ADN
- Information Processing is used
  - SOAP documentation is used by grad until IP is added to all assignments
Recommended Use Case: Additional Notes

- If time is an issue for courses, some modules may be substituted by the focused exams, and post-exam activities except self-reflection be hidden, but findings would not be filtered.
- The time spent in SH virtual patient simulations supports, but does not replace some high fidelity / task trainer simulations.
Recommended Use Case: Modified Cases

Lab Pass

- Allow reopening to achieve performance expectations
- Not graded
  - Percentage attained or time expectations met earns a “Pass”

Flipped Classroom

- Sequenced after didactic activities
  - Textbook content or video lecture
- Allow reopening to achieve percentage expectations
- Not graded
  - Percentage attained or time expectations met earns a “Pass”
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