Operational Prototyping:
Maximizing efficiency, minimizing costs, maintaining flexibility
For any healthcare entity today, the challenges of planning in the wake of healthcare reform are complex, uncertain and all-consuming. Future healthcare must meet a lofty set of value-driven demands. Providers are being called to simultaneously reduce costs, increase efficiency and productivity, and improve the quality of and satisfaction with the patient experience.

Add to this the challenges of hospital-physician integration and accountable care - now usually mentioned in the same breath. Then there is the requirement to provide capacity for and effective incorporation of current and future technologies. There is also the balancing act of supporting ambulatory strategy with larger, multi-specialty outpatient facilities offering higher-acuity services, but in less square footage. Next, throw in the need to stay flexible in the face of unforeseen future changes and prepare for a wide range of probable outcomes. Finally, consider the millions of new patients who will get health insurance next year, bringing with them an unknown set of characteristics. Will they be mostly young and healthy, or older with more chronic and previously uninsurable pre-existing conditions?

Fortunately, there is a proven methodology that can help providers to meet many of these challenges. It is called operational prototyping, or OP. With its original roots in early software development, OP has already been used effectively in the healthcare world. In essence, OP is the systemized application of common sense. But it is much more than that. With all the aforementioned complex healthcare questions begging for answers, OP provides an approach to identifying optimal solutions that can be customized, optimized, standardized and replicated throughout a hospital, health system or physician practice group.

Using the principles of OP, healthcare operations are thoroughly evaluated and assessed. Unique best practices are identified and then operational models are created to facilitate and maintain them. The best part: these models can be applied not to just one facility, but can be replicated across a system.

That’s how OP can help to make it possible to streamline operations and cut costs while still delivering the reasonable, quality care that everyone expects. Some opportunities and challenges that might potentially benefit from OP include changing technology requirements, branding objectives, the need for improved staff interaction, planning for cross-functional space, determining real estate requirements and gaining operational efficiencies across the board.
While no two OP solutions are the same, the common denominator of all of them is lower costs, higher quality, increased efficiency and improved flexibility. Used properly, OP allows you to keep costs under control as you:

- Develop a customized, well-delivered model of care
- Provide a quality experience to patient, family and staff alike
- Maintain operationally efficient facilities and practices
- Set standards for group purchasing
- Design cross-functional space that flows and accommodates with adaptability
- Strengthen brand identity
- Implement integrated technology
- Facilitate effective staff interaction
- Accommodate varying populations, cultural differences and skill sets
- Set yourself apart from your competition
- Establish a standardized solution with modular capability that is also flexible, adaptable, and replicable

**How it’s done:**

It all starts with determining and designing your entity’s care environment best practices, which entails a deep analysis of all the things that affect it, including identifying and envisioning your desired delivery of care. The OP team takes all of this into consideration as it assesses the system’s current state, looking for ways to improve it by developing effective solutions. This involves not just the design of the physical plant itself, but the processes within - looking at everything from registration to technology to supply management to lab methodology and more. Upon mutual agreement, the OP team sets about designing and determining effective solutions and models.
**OP solutions to healthcare challenges in an age of reform:**

Healthcare reform challenges need not lead to indecision and paralysis. Although OP is no panacea, the application of OP principles can help providers to develop potential solutions to a range of challenges:

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Operational Prototyping Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taking an honest look at costs: Changes on the healthcare horizon mean not just more patients, but different types and more robust, system-wide education initiatives.</td>
<td>OP helps pinpoint and accommodate the needs of patients and determine where funds should be allocated. This could translate to a dedicated conference room for patient education. Today’s investment translates to a value-add tomorrow.</td>
</tr>
<tr>
<td>Getting the technology piece right: All-important to future healthcare is the effective integration and implementation of computers. With electronic medical records (EMR) accessibility regulations in full swing, this is especially critical.</td>
<td>OP processes can help to support technology implementation and integration as it relates to such challenges as planning, exam room design and kiosk registration.</td>
</tr>
<tr>
<td>Avoiding communication pitfalls and bolstering staff interaction: Quality healthcare depends on clear, timely, accurate and unencumbered communication. Anything less could lead to dire consequences.</td>
<td>OP can improve not just the flow of “on stage” communication, in the presence of the patient, but “off stage” confidential staff communication. A solution might mean surrounding a core, private staff area with outlying exam rooms.</td>
</tr>
<tr>
<td>Maximizing space: Many healthcare entities struggle with the lack of adequate space and using it to its full advantage.</td>
<td>The OP process helps create a realistic vision for your individual space needs with design elements to satisfy them. Expanding the functionality of a multi-purpose room eliminates cost and adds to flexibility of your operations.</td>
</tr>
<tr>
<td>Attaining the optimal physician mix: Arriving at the best combination of physicians and practices can be elusive and logistically challenging.</td>
<td>OP helps to navigate through the choppy waters of strategically staffing and accommodating the ultimate physician mix. Standardized exam room models lead to cross-functional space designed to smoothly accommodate multiple functions and practices.</td>
</tr>
<tr>
<td>Managing populations: One of the tenets of future healthcare is being prepared to treat patients that fall into defined groups or populations, and their specific needs. Cardiac, diabetic and bariatric patient groups are among the most common.</td>
<td>Applying OP to population health management helps to rein in costs and ensure quality care and experiences. A bariatric population’s specific needs might mean adequately sized furnishings and hardware. Getting a firm handle on those affiliated needs and costs in advance will save money and ensure preparedness.</td>
</tr>
<tr>
<td>Recognizing cultural and regional differences, skills: Different patient populations mean distinct backgrounds, needs and expectations. As the needs are different, so are the solutions, and what works in one area may not work in another.</td>
<td>A kiosk registration area might work well for a provider catering to younger patients, but for those that serve seniors, the manned registration station could be the answer. Family practices might opt for more seating and facilities to accommodate extended families.</td>
</tr>
</tbody>
</table>
OP in action: Helping a university health system in a growing community to meet its goals

A university’s healthcare system recently used OP to help optimally plan and shape its vision for a new 100,000 square foot Ambulatory Care Center (ACC) in a growing community.

The goals of the health system’s leadership were to provide a community-based, user-friendly operation that would deliver high-quality care, while accommodating and adapting to inevitable change. Communications were to be enhanced, exam room usage was to be maximized and the health center desired to attain a replicable group practice module.

OP processes were employed to examine all desired functions and capacities. Using operations modeling, standardized facility pod development and development services, flexibility and efficiency was gained across the board while costs were controlled.

Some of the solutions incorporated included making rooms both cross-functional and more accommodating for multiple physician types, overhauling the supply management process with a computer-based supply system, and deploying a centralized kiosk registration system.

The resulting ACC has exceeded leadership’s goals and provided the quality standard of care they hoped for, while keeping costs in check.

Investing in OP today means a value-add tomorrow

Operational prototyping allows today’s health system or medical practice the opportunity to examine what is needed to optimize care delivery, then fine-tune the methodology to achieve it, while keeping quality and costs to their desired levels. Planning for and taking into account what is needed in this era of healthcare reform - including flexibility in space and operations with cost control and predictability, and improved and streamlined communications - will ultimately reap the desired result by delivering greater value, quality, economy, efficiency and satisfaction for all involved.

Rebecca Flink is a Senior Operations Planner with Hammes Company and former Vice President of Facilities Development for Aurora Health Care. She has over 30 years of diverse healthcare leadership experience in various nursing, administrative, ambulatory and facility development roles. Her focus has been on leading the design and implementation process, incorporating building standards, consistent operational flows and improved clinical staff efficiencies while always recognizing the “patient experience” as paramount to a successful clinical project.

Rebecca can be reached at rflink@hammesco.com.