

Successful implementation of a pediatric pharmacy team-level strategic plan during the COVID-19 pandemic

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Strategic planning can be used in health systems, including at standalone pediatric hospitals, to establish focused and directed goals that align with the institution's vision and mission. Within pharmacy departments specifically, such plans can be used to improve the quality of medication usage.^{1,2} Strategic plans are many times executed at the departmental level or higher of an organization, while planning at lower organizational levels is generally rare and may even be discouraged. This is due to the potential for goals to misalign with or diverge from the organization's macroscopic business or strategic plan. Despite this potential conflict, strategic planning at the clinical team level may complement a pharmacy department's goals by prioritizing ideas, fostering accountability, and increasing crisis resiliency for frontline staff.^{3,4} Although strategic planning principles have been used in hospital pharmacies for decades, there are no reports to our knowledge that discuss development or implementation of microscale strategic planning in an inpatient pharmacy setting. The purpose of this report is to describe a successful 1-year strategic plan that was developed by a pediatric clinical pharmacy team in a large safety-net hospital immediately before the escalation of the national response to the coronavirus disease 2019 (COVID-19) pandemic in early 2020.

Institutional context. Denver Health Medical Center is a 550-bed adult and pediatric safety-net hospital located in downtown Denver, CO. The institution's pediatric services include a level 2 pediatric trauma center and a 7-bed pediatric intensive care unit (PICU), a 25-bed pediatric general medicine unit, level 2 and level 3 neonatal ICUs (NICUs) with 30 total beds, and an obstetric service with over 40 beds.

Pharmacy services for the above units are provided by a core pediatric pharmacy team consisting of a clinical pharmacist specialist and 3 full-time clinical staff pharmacists

complemented by a pediatric lead pharmacy technician and a pediatric-specific intermittent pharmacist. Several adult medicine pharmacists who are cross-trained in pediatrics work in the satellite intermittently when core staff members are unavailable. Clinical pharmacy and drug distribution responsibilities are carried out from a pediatric satellite pharmacy from 6:00 AM to 8:30 PM every day. Daily services include electronic order verification for all the above units; rounding in the PICU, pediatric, and NICU units; pharmacokinetic consults for vancomycin, aminoglycosides, anticoagulation, and parenteral nutrition; and clinical review of all discharge prescriptions.

Rationale. The rationale for creating the strategic plan at the team level included both social and organizational reasons. The Denver Health pediatric pharmacy team had experienced substantial turnover for several years leading up to 2019. In the year 2019 alone, 3 positions on the core team were vacated within a 6-month timeframe, which had the potential to jeopardize the morale of the remaining team members. With the hiring of 3 new clinical staff pharmacists in late 2019 came a large influx of new and innovative ideas for improvements to clinical and operational services. Although new ideas could bring improvement to the team's services, an inundation of disorganized ideas could also threaten the team's success. Pharmacy department management and the clinical pharmacist specialist recognized the unique opportunity to build team rapport, establish team member accountability, and focus ideas by experimenting with the creation of a team-based strategic plan. The plan was ambitiously titled "Vision 2020."

Although unforeseen at the time of development of the strategic plan, an unintended advantage was improving team resiliency during the COVID-19 pandemic. The timing of strategic plan development in February 2020 allowed it to be formulated

immediately before the local pandemic response escalated in late March. Despite the pediatric pharmacy team needing to abruptly adapt its services to assist with an adult-focused disaster response, the strategic plan still provided a framework for the team to focus on goals, thereby continuing to improve its services.

Methods. Preliminary discussions about creating a team-based strategic plan began in the winter of 2019. Once the clinical pharmacist specialist and department management agreed to implement the project, the team enlisted the services of Denver Health's Lean department, a group responsible for improving the institution's success by utilizing a set of organizational principles and philosophies to eliminate waste and maximize value. Lean department representatives helped to schedule and organize the strategic planning activities. At the outset of the project, it was agreed that certain conditions must be met to ensure the pediatric team's goals aligned with the goals of the department and the institution as a whole. For example, it was agreed that at least one management representative would be present for all strategic planning meetings to ensure Vision 2020 was consistent with the overall departmental goals. Additionally, the plan required approval by the department director before its implementation. Lastly, the pediatric pharmacy team was given latitude to develop their own unique vision statement, with the requirement that it comport with the department's overall mission statement.

Preparation. With the assistance of a senior Lean facilitator, the team gathered data regarding its services to be used for analysis during the strategic planning meeting scheduled in February 2020. During this phase, all 5 pediatric pharmacy team members individually completed an internal assessment and environmental scan in January 2020

while 3 cross-trained pharmacists served as consultants, providing input as needed. The internal assessment gathered opinions on the service's strengths and weaknesses in the areas of satisfaction, quality, finances, and time on a standardized form provided by the Lean facilitator. The environmental scan recorded individuals' views regarding opportunities and threats from economic, competitive, technological, social/cultural, and political/regulatory perspectives. In addition, a 10-question environmental survey was sent to pediatric nurses, physicians, and other pharmacy staff to obtain customer perceptions of the pediatric pharmacy team's quality in areas such as safety, timeliness, professionalism, contribution, and accessibility. Because this project represented a unique learning experience, the design and administration of this survey was assigned to a postgraduate year 1 pharmacy resident completing a pediatric experience in the satellite pharmacy at the time.

The data from the internal assessment, environmental scan, and environmental survey were compiled and summarized by the clinical pharmacist specialist in a formal report that was reviewed by the team before the strategic planning meeting in February 2020.

Strategic planning meeting. Although strategic planning meetings are typically executed over the course of many days, the meeting for this small team was split into two 4-hour afternoon sessions on 2 consecutive weekdays due to staffing constraints. On day 1, the team and manager representatives worked with the Lean facilitator to develop a unique vision statement for the pediatric satellite pharmacy that complemented the overall vision of the department. This was followed by completion of a strengths, weaknesses,

opportunities, and threats (SWOT) analysis based on the data gathered during the previous weeks.

On day 2, the team reconvened to formulate a menu of 16 potential goals to be narrowed down on the basis of the results of the SWOT analysis. Grading these ideas on the basis of their degree of impact and required effort, the team agreed on 9 final goals involving 14 objectives to accomplish during the year. These final goals and objectives are summarized in Table 1. Accountability was maintained by assigning specific team members to each goal to oversee progress over time and ensure their completion.

After conclusion of the meeting, the clinical pharmacist specialist summarized the methods, findings, and results from the meeting in a 33-page report that was published and presented to senior departmental management for final approval, which was granted in April 2020. Afterwards, an overview of this process and plan was also presented to the organization as a whole for input during a Lean department seminar.

Implementation. To track the team's progress with their established goals, an electronic "tracker" spreadsheet was created that was updated on a weekly basis to monitor the status of objectives and goals and document any barriers to success. Because of the escalating COVID-19 pandemic response and the relative novelty of tracker use, the team was not able to fully implement the tracker process as intended until late summer 2020. However, the team was able to regularly inform each other of their goal progress at weekly pediatric satellite team meetings (including pharmacy management) throughout 2020 to address achievements and challenges. The team also utilized the quarterly newsletter developed as part of objective 2.2 (Table 1) to communicate the strategic plan and progress to customers and colleagues in other service lines.

Strategic plan outcomes. Despite the potential obstacles and setbacks posed by the COVID-19 pandemic to service improvements throughout 2020, the pediatric satellite pharmacy team was able to achieve a significant number of its goals, and 12 of 14 objectives were completed by February 2021 (Table 1). Objectives 3.2 and 8.1 could not be completed owing to COVID-19 restrictions at local pharmacy schools and a lack of available time due to the team's emergency pandemic response, respectively.

Although general opinion may hold that strategic plans should not be developed at frontline levels within institutions, this case demonstrates that successful plans can indeed be developed in small teams with adequate resources and ambition. The following factors aided in the success of this plan:

- 1) Buy-in, guidance, and direct oversight by pharmacy management in strategic planning activities
- 2) Guidance and education from our institution's Lean department
- 3) Diligent data gathering from both team members and customers/stakeholders before the planning meeting
- 4) Delegation of strategic planning tasks to pharmacy learners (the environmental survey, etc)
- 5) Accountability by mutual team members implemented and documented directly in the plan
- 6) Formal progress-tracking methods and weekly real-time goal status updates

Certain limitations in our process should be noted. For example, not every institution has the benefit of a Lean department to help with strategic planning, which could make it difficult to extrapolate this project to other institutions. In addition, this strategic plan was

created at a unique juncture, when a particularly new and ambitious team was assembled before an unforeseen time of crisis, which is likely not typical.

Because of the success of this project, the pharmacy department is now attempting to implement similar team-level strategic plans for other clinical service lines, such as the adult intensive care and internal medicine teams. In addition, the pediatric team carried out a second strategic planning meeting in February 2021 entitled “Momentum 2021” that utilized data from Vision 2020 and a repeated environmental survey to formulate 5 goals with 8 objectives to complete before February 2022.

Summary. The creation of a clinical team–level strategic plan established feasible and realistic goals despite obstacles presented by a pandemic. With achievement of over 80% of the established goals (with 2 unachieved directly because of circumstances outside of the team’s control), the formal process of data gathering, SWOT analysis, and progress tracking used by the team was shown to be achievable by a small group. Moreover, the oversight and guidance from management ensured that team goals were consistent with the department’s overall objectives and mission, avoiding potential conflicts and misalignments of priorities and resources. The ability to complete the actual planning meeting within 8 hours also supports the view that team-level planning can be accomplished even with limited amounts of time. Strategic planning can also provide numerous educational opportunities for pharmacy learners who can assist with data gathering, activity planning, and other duties. Lastly, the prospective application of this process to other Denver Health clinical pharmacy teams and the development of a second strategic plan by the pediatric pharmacists demonstrate that this process is both adaptable and durable. On the basis of

our experience, we encourage other institutions to consider the value of team-level strategic planning and investigate implementing this process within their own departments.

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Table 1. Pediatric Team Vision 2020 Goals, Objectives, and Completion Status

Strategic plan goal	Objective	Status as of February 2021
1. Host external pharmacy residents on a child/maternal health experience	1.1: Develop and obtain contracts with external pharmacy residency program(s) within 6 months before 2020-2021 academic year	Completed
	1.2: Pass 2 external PGY1 and/or PGY2 pharmacy residents on a child/maternal health experience in the 2020-2021 academic year	Completed
2. Provide pharmacy education to pharmacy, nursing, and provider colleagues	2.1: Prepare and deliver 3 presentations per month to pharmacy, nursing, and/or providers from July through December 2020	Completed
	2.2: Send out educational newsletters to pharmacy, nursing, and providers each quarter from July through December 2020	Completed
3. Increase the number of given lectures and precepted pharmacy students	3.1: Schedule and precept 2 to 4 learners from local pharmacy schools within 6 to 12 months	Completed
	3.2: Schedule 2 to 3 pediatric pharmacy lectures for students at local pharmacy schools within the next 6 to 12 months	Not completed
4. Develop Joint Commission medication-related training documents to be distributed to rotating medical residents	4.1: Develop Joint Commission medication-related training documents to distribute to rotating residents on a monthly basis by the end of 2020	Completed
5. Orient incoming medical resident to Denver Health pharmacy's role	5.1: Formally orient incoming medical residents to Denver Health pediatric pharmacy's role on a monthly basis by June 2020	Completed
	5.2: Provide reference materials to incoming medical residents to guide prescribing practices in order to reduce errors and strengthen relationships between pharmacy and the medical team(s) by June 2020	Completed
6. Implement collaborative drug therapy agreements within Denver Health's pediatric departments	6.1: Implement 1 to 2 collaborative drug therapy agreements within Denver Health's pediatrics departments, allowing pharmacy control of initial doses, dosing changes, and drug monitoring by the end of 2020	Completed
7. Standardize pharmacy references for pediatric medications and their use by pharmacists, nursing, and providers	7.1: Standardize references utilized for pediatric medications and their use by pharmacists, nurses, and providers at Denver Health by February 2022	Completed
8. Update and revise pediatric-specific order sets in EMR	8.1: By the end of 2020, audit 30% of pediatric inpatient order sets to look for actionable changes involving inaccurate medication builds or inconsistencies with actual practice by the end of 2020	Not completed
9. Develop EMR programming for major CDTAs and minor interventions to publish as progress notes	9.1: Develop Epic programming for 2 major CDTAs and successfully implement across pediatrics department within 9 to 12 months	Completed
	9.2: Develop Epic programming for 3 minor interventions for publishing interventions to progress notes and successfully implement across pediatrics department within 9 to 12 months	Completed

Abbreviations: CDTAs, collaborative drug therapy agreements; EMR, electronic medical record; PGY, postgraduate year