

Bringing Together Specialty Pharmacy and Innovation to Improve Patient Outcomes

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DISCLOSURES

Faculty

Rina Shah, SVP, Enterprise Specialty Pharmacy and Growth at Walgreen Co., has no relevant financial relationship(s) with ineligible companies to disclose, and has been employed by Walgreen Co. since 1997.

Planners

None of the planners for this activity have any relevant financial relationships with ineligible companies to disclose.

OBJECTIVES

AT THE COMPLETION OF THIS ACTIVITY, PHARMACISTS AND TECHNICIANS WILL BE ABLE TO:

- Describe the role of specialty pharmacy in medication access, adherence, care coordination, and patient safety for patients with complex and chronic conditions.
- Evaluate the use of data analytics, AI, and emerging technologies to identify patient risks, support clinical decision-making, and enable personalized care in pharmacy.
- Discuss innovations in specialty pharmacy, including cell and gene therapies and technology-enabled care models that improve patient outcomes and operational efficiency.

PRE-TEST

Which of the following is a key role of specialty pharmacy?

1. Manufacturing medications
2. Coordinating access, adherence, and patient care
3. Diagnosing rare diseases
4. Replacing physician treatment plans

PRE-TEST

What is one way AI supports pharmacy practice?

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2. Predicting medication demand and identifying high-risk patients
3. Eliminating regulatory requirements
4. Writing prescriptions for providers

PRE-TEST

Why are specialty medications often associated with high-touch patient care?

1. They are available over the counter
2. They typically have simple treatment regimens
3. They treat complex or chronic conditions and require ongoing monitoring
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PRE-TEST

What is the primary difference between gene therapy and cell therapy?

1. Gene therapy uses donor cells only
2. Cell therapy changes faulty DNA directly
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PRE-TEST

According to the presentation, what is the most important principle when using AI in pharmacy?

1. AI should make all final clinical decisions
2. AI should only be used for inventory management
3. AI serves as a support tool, while pharmacists remain the ultimate decision-makers
4. AI eliminates the need for data privacy safeguards

SPECIALTY CARE IS AT A CROSSROADS

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54%

total prescription drug spending on specialty drugs in the U.S.¹

5x

increase in total spending on specialty drugs in the past decade.²

70-78%

of the novel FDA drug approvals are for specialty therapies.³



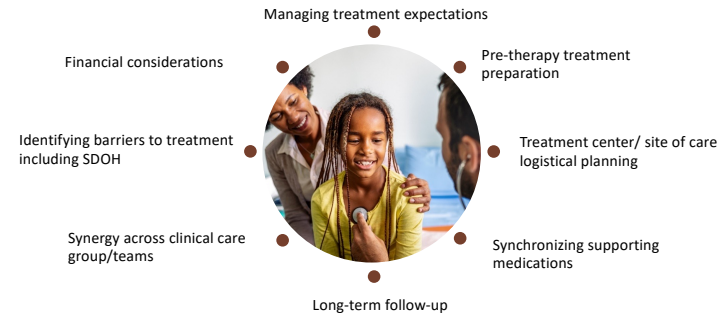
- Innovative, personalized medications are giving new hope for patients with chronic, complex and rare conditions.
- With this progress comes challenges—soaring costs, access barriers, and the complexities of managing specialized care within an already strained healthcare system.
- Specialty therapies are changing how diseases are managed, and the right pharmacy partner is key to keeping costs down and improving results.

1. 2020 Understanding the Use of Medicines in the U.S. // <https://www.fda.gov/oc/2020/08/2020-understanding-the-use-of-medicines-in-the-u-s>
Published November 20, 2020. 2. Lisciani A. Navigating the Rapid Growth of Specialty Drugs: Opportunities, Challenges, and the Path Ahead. // <https://www.fda.gov/oc/2020/08/2020-navigating-the-rapid-growth-of-specialty-drugs-opportunities-challenges-and-the-path-ahead>
Published September 2, 2020.

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CONSIDERING THE PATIENT JOURNEY & SPECIALTY PHARMACY ROLES

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SPECIALTY MEDICATIONS TREAT COMPLEX AND/OR CHRONIC CONDITIONS

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Severe and often life-threatening conditions, like cancer, autoimmune disorders, or rare genetic diseases



Provider collaboration is essential

- Ensuring individualized care is accessible to each patient
- Coordination of payer coverage/approvals as needed; specialty therapies are often more expensive than other medications
- Oversight/awareness of adverse events to modify treatment regimen if needed



High-touch patient care requirements

- Enhancing patient experience and optimizing patient outcomes through specialty pharmacy
- Extensive patient management, including medication education, side-effect mitigation and adherence monitoring



Product special handling and administration

- Handling, storage or delivery requirements to protect product efficacy, e.g. temperature, light
- Must be taken as prescribed, and some have complex treatment regimens, like self-injection
- Further clinical evaluation often required before refills are dispensed

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Data, Technology and AI, and Pharmacy

Foundations of AI in Pharmacy Practice

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What is AI?

Enables computers to perform cognitive tasks

- Reasoning
- Learning
- Language understanding
- Problem solving

Types Used in Pharmacy

- **Rule-based systems** apply predefined clinical safety rules.
- **Machine learning** predicts adherence and flags high-risk patients.
- **Natural Language Processors** interprets prescriber/pharmacist notes and messages.
- **Robotics** automate dispensing and inventory management.

AI in Pharmacy Practice: Clinical & Operational Impact

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Clinical Benefits

- Early detection of **adverse drug events**
- Highlights **therapy gaps** and safety concerns
- Supports **management of complex medication** regimens

Operational Benefits

- **Automates data entry** and inventory checks
- Predicts **medication demand**; reduces waste
- **Frees staff time** for direct patient care

Governance & Ethics

- **AI is a support tool** — pharmacist ultimate judge
- Must align with **regulatory and ethical standards**
- Strong **data privacy** and cybersecurity safeguards essential

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Connecting Specialty and Technology to Improve Outcomes

Innovation in Specialty – Cell & Gene

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Cell Therapy = Transferring Live Cells

Live cells are grown or modified outside of the body and transferred through infusion into a patient to help lessen or cure a disease.

Autologous
Patient's own cells are removed and genetically modified.



Allogeneic
Donor cells are genetically modified.

Gene Therapy = Changing Faulty DNA

Replaces, deactivates, or repairs the faulty DNA that is causing the disease.

Deliver functional DNA

A vector, usually of viral origin, delivers functional DNA into the patient's cells.

Restore gene function

Restoring gene function allows for proteins to be properly produced to lessen or cure a disease.



American Society of Gene & Cell Therapy. (2023, December 18). Cell Therapy Basics. <https://asgct.org/education/asset/cell-therapy-basics>
U.S. Food and Drug Administration. (2024). What is Gene Therapy? <https://www.fda.gov/vaccines-blood-biologics/cellular-gene-therapy/products/what-gene-therapy>

The Innovation Gap & PHI Wall

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The Challenge	PHI Protection Move fast or be safe?	Enterprise Costs Big teams & big price tags	Vendor Timeline Feature releases may not fit
Today's Approach	Learning Exchange Peer-to-peer	Solutions for all settings Byte-Sized Approach	Use AI as a development partner Local Tools

Closing Remarks

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1. Specialty pharmacy is at the forefront of innovation however there are many factors to address to ensure improved outcomes
2. AI and technology is advancing to improve efficiencies and outcomes within pharmacy
3. Pharmacy can play a critical role in improving patient outcomes by connecting the role of specialty pharmacy and technology

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AUDIENCE ENGAGEMENT

Which innovation do you think will have the greatest impact on patient outcomes over the next 5 years?

- AI-enabled clinical decision support
- Predictive analytics and risk identification
- Gene therapy
- Cell therapy
- Digital patient engagement tools

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REFERENCES

1. 2025 Understanding the Use of Medicines in the U.S. IQVIA Institute.
2. Niu S, Happe L, Abuloha S, Svensson M. Concentration of spending and share of specialty drug spending in Medicare Part D over a 10-year period. Journal of Managed Care & Specialty Pharmacy. Published November 29, 2024.
3. Szczotka A. Navigating the Rapid Growth of Specialty Drugs: Opportunities, Challenges, and the Path Ahead. Pharmacy Times. Published September 2, 2024.

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THANK YOU!

Questions?
You can reach me at

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