

Bottom of the Pyramid: Charting the Course for Lower Drug Prices



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Disclosures and Conflict of Interest

Dr. Nikocevic and Ms. Patel declare no conflicts of interest, real or apparent, and no financial interests in any company, product, or service mentioned in this program, including grants, employment, gifts, stock holdings and honoraria.



Disclosure of AI Use

Artificial intelligence (ChatGPT, OpenAI GPT-5.5) was used during the development of this presentation for brainstorming, organization of content, language refinement, and drafting. All content was independently reviewed, verified using scholarly and professional literature, and edited by the presenter prior to inclusion.

Dates used: June-July 2026



Pharmacist Objectives

At the conclusion of this program, the pharmacist will be able to:

1. Define the concept of bottom-of-the-pyramid (BoP) markets in the context of drug pricing.
2. Describe key factors that influence drug pricing for low-income populations.
3. Identify common strategies used to improve medication affordability in BoP markets (e.g., generics, tiered pricing)
4. Explain why equitable drug pricing is important for access to healthcare in underserved populations.



Technician Objectives

At the conclusion of this program, the pharmacy technician will be able to:

1. Define the concept of bottom-of-the-pyramid (BoP) markets in the context of drug pricing.
2. Describe key factors that influence drug pricing for low-income populations.
3. Identify common strategies used to improve medication affordability in BoP markets (e.g., generics, tiered pricing)
4. Explain why equitable drug pricing is important for access to healthcare in underserved populations.



1. Which statement best describes the Bottom of the Pyramid concept in the context of medication access?
 - A. Providing charitable medication donations as a temporary solution
 - B. Designing affordable, scalable, and sustainable solutions with underserved populations
 - C. Limiting innovative medications to higher-income markets
 - D. Reducing every medication to the same price

Pre-Test Questions



2. Which combination can influence medication prices and patients' out-of-pocket costs?
- A. Research and development, exclusivity, competition, rebates, and benefit design
 - B. Medication color, tablet shape, and package size only
 - C. Patient age and prescriber specialty only
 - D. Pharmacy operating hours and parking availability only

Pre-Test Questions



3. Which strategy allows patent holders to authorize qualified manufacturers to produce lower-cost versions in defined markets?
- A. Differential pricing
 - B. Voluntary licensing
 - C. Prior authorization
 - D. Cost sharing

Pre-Test Questions



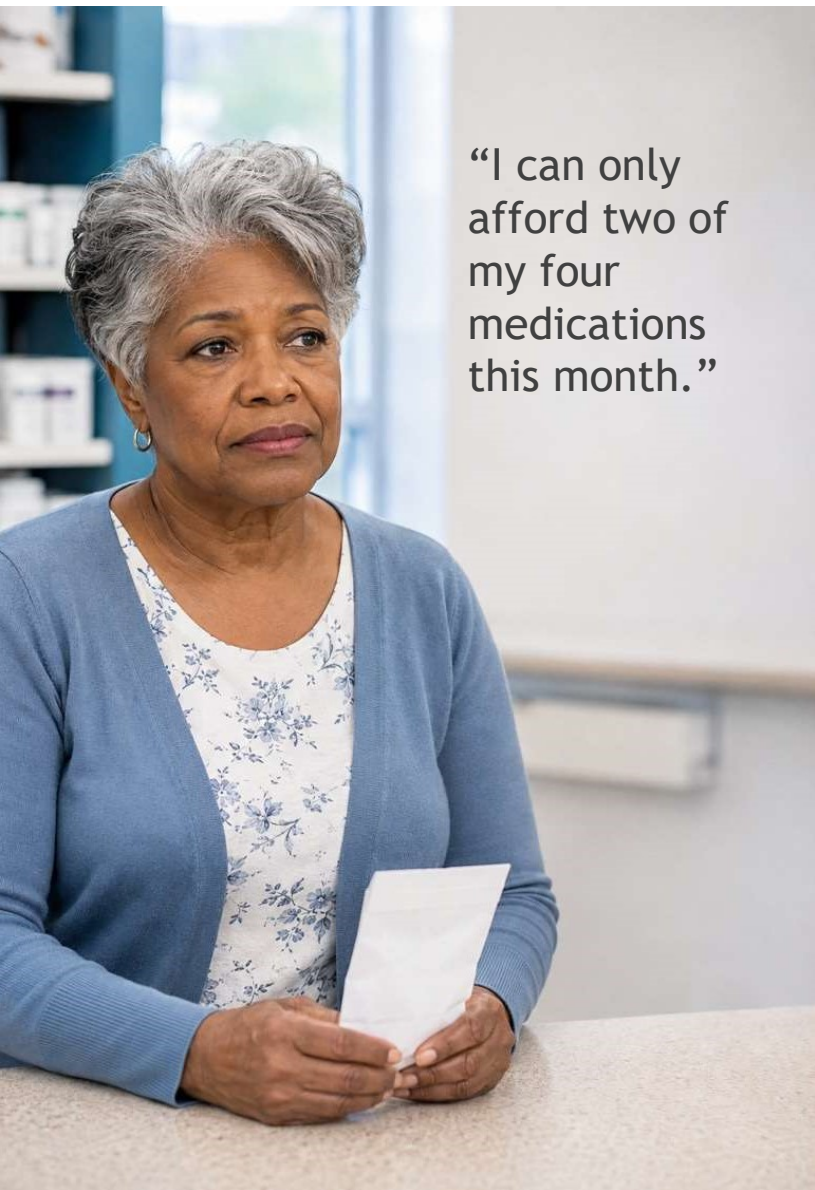
4. Lowering a medicine's price guarantees medication access.

A. True

B. False

Pre-Test Questions





“I can only afford two of my four medications this month.”

A Patient We All Recognize

Mrs. Johnson, 62 years old

PMH:

- Type 2 diabetes
- Heart failure
- Hypertension

Medications:

- Semaglutide
- Empagliflozin
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Image generated using ChatGPT (OpenAI), July 2026.



Medication Affordability Affects Health Outcomes

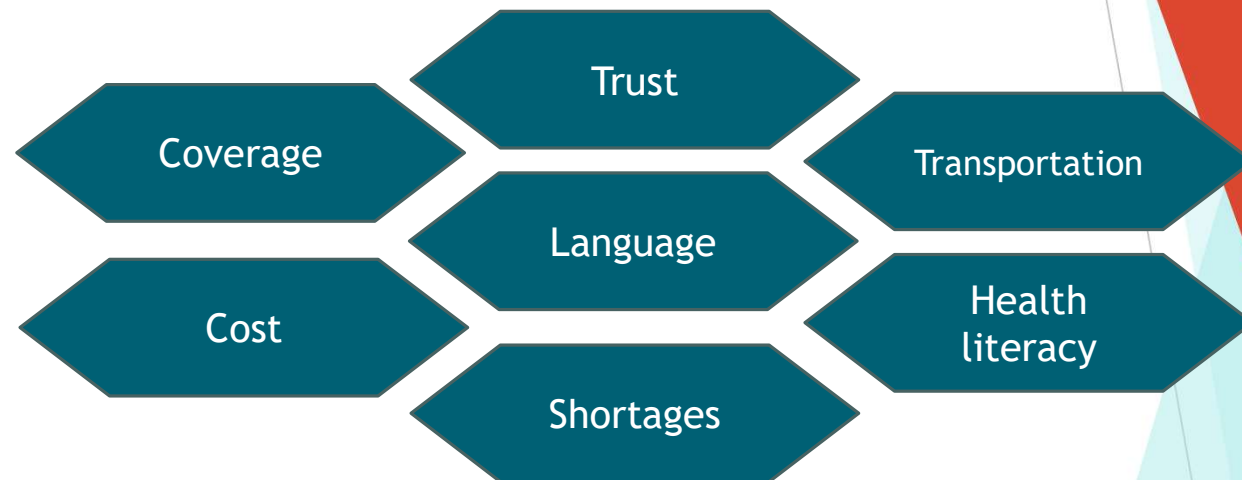
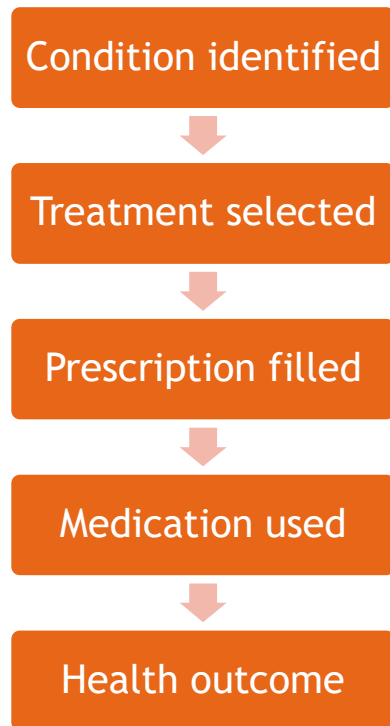
Population	Rate of cost-related non-adherence
Overall	8.2%
Adults with disabilities	20.0%
Fair/poor health	18.0%
Uninsured adults	22.9%
Pattern	Higher in vulnerable groups

8.2% of U.S. adults aged 18-64 using prescription medications reported cost-related nonadherence.

1. Mykyta L, Cohen RA. NCHS Data Brief. 2023;(470):1-8.



Barriers Can Break the Medication Journey



A barrier at any stage can prevent an appropriate medication from benefiting the patient.

¹ Mykyta, Cohen, 2023; ² Berkman et al, 2011; ³ Syed et al, 2013; ⁴ FDA Drug Shortages Task Force, 2020; ⁵ Bradshaw et al, 2007; ⁶ Levesque et al, 2013.



What Is the Bottom of the Pyramid?

TRADITIONAL ASSUMPTION

- Low-income populations are passive recipients of aid

BoP PERSPECTIVE

- Underserved populations are active participants, consumers, and partners in innovation

1998 — Initial working paper

2002 — Prahalad and Hart article

2005 — Expanded book

Today — Inclusive innovation and access

Use BoP as a lens—not a claim that markets alone solve inequity.

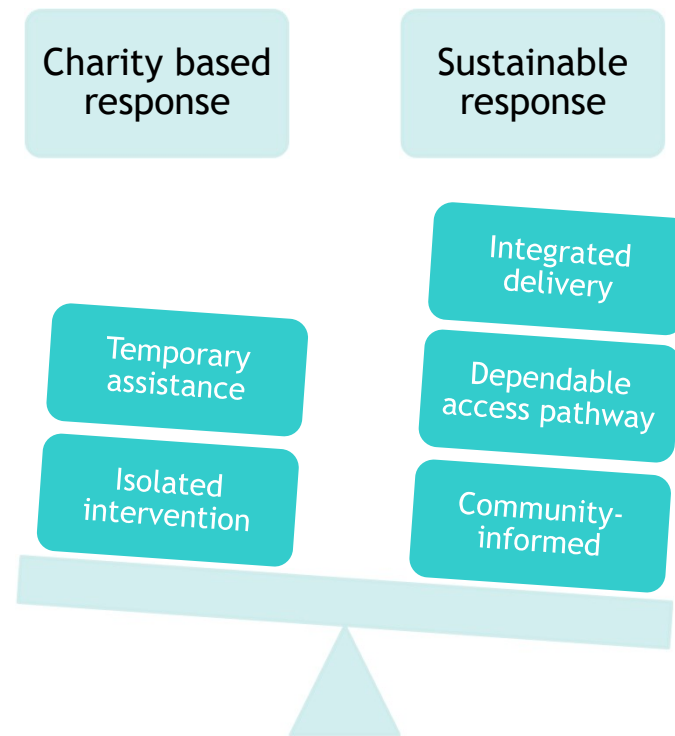
⁷Prahalad, Hart, 2002; ⁸ Prahalad, 2005.



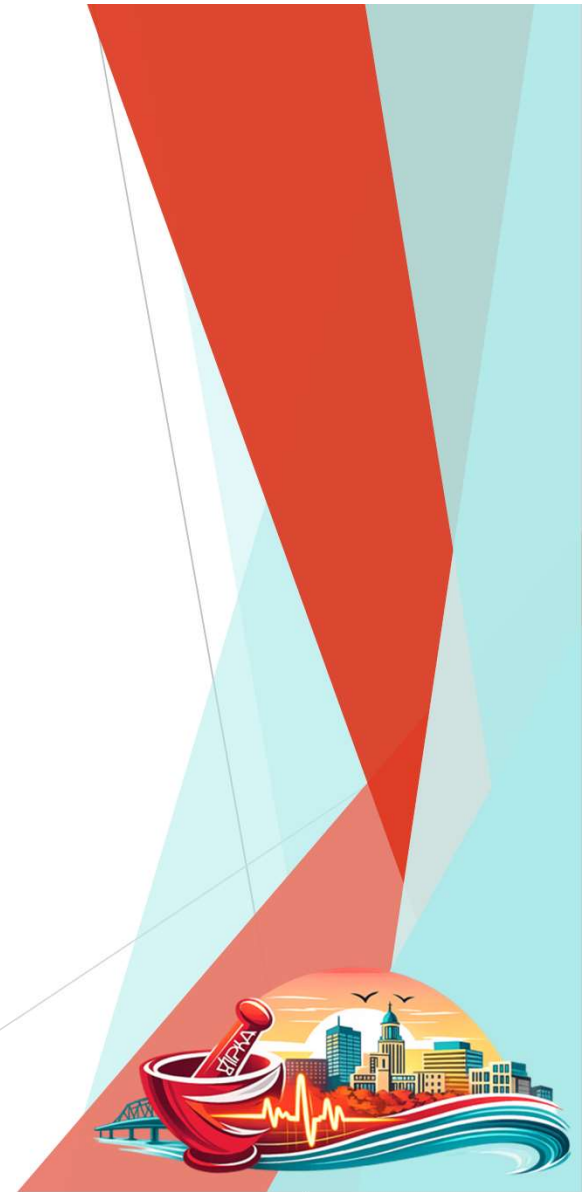
BoP Thinking Requires System Redesign

CORE PRINCIPLES:

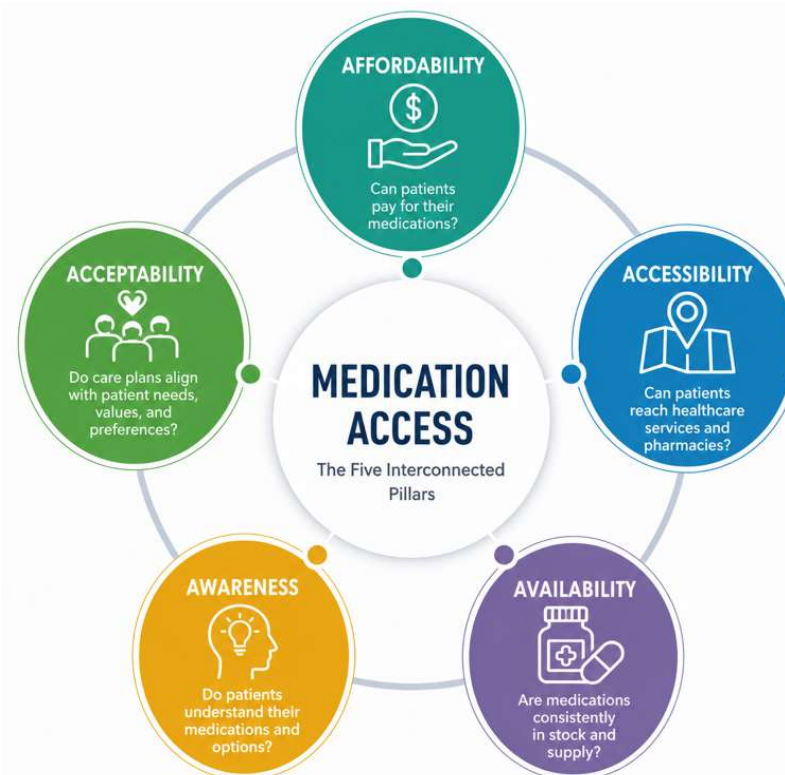
- Innovation
- Local engagement
- Partnerships
- Scalability
- Sustainability



⁷ Prahalad, Hart, 2002; ⁹ London, Hart, 2004; ¹⁰ Simanis, Hart, 2008.



Medication Access Has Five Interconnected Dimensions

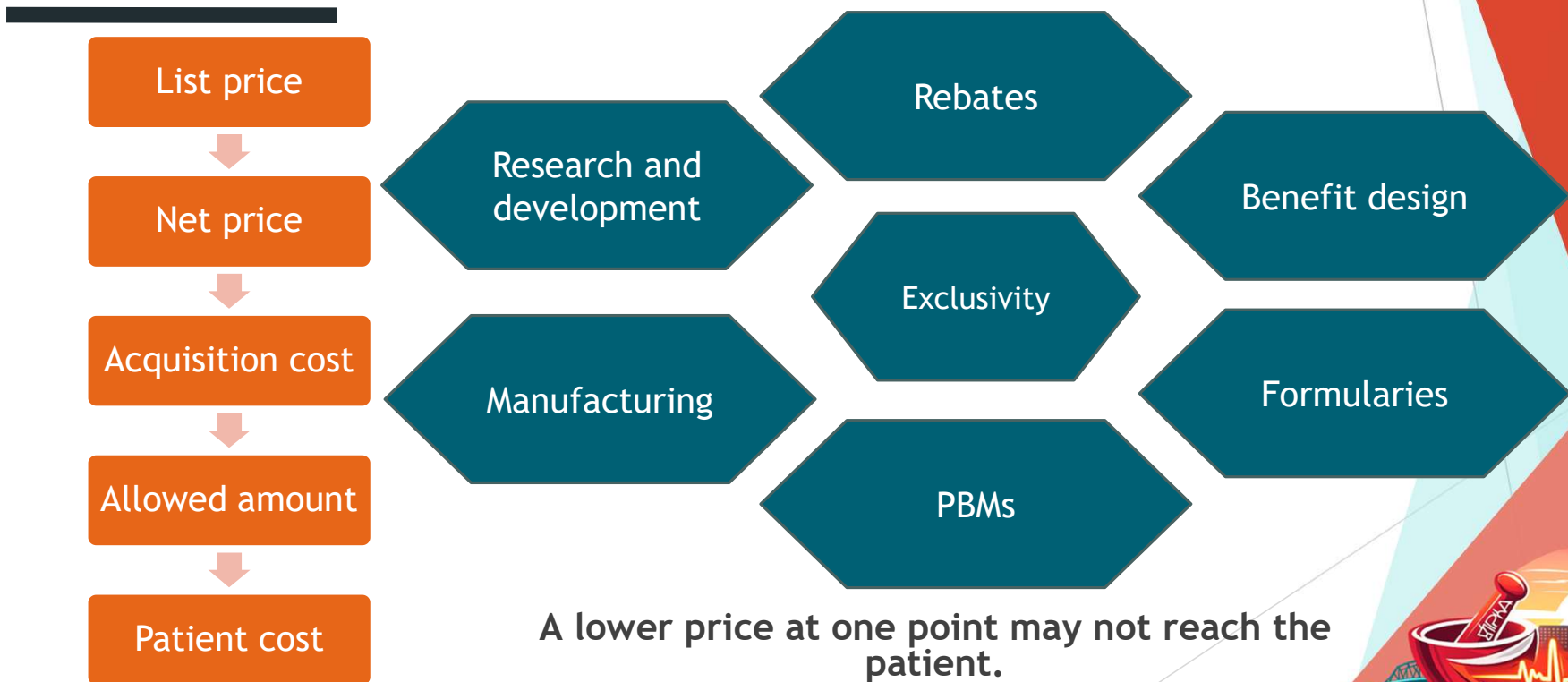


Presenter-adapted medication-access framework informed by published healthcare-access models.

⁶ Levesque et al, 2013; ¹¹ Penchansky, Thomas, 1981.



“Drug Price” Is Not One Number



¹² Dusetzina, Bach, 2019; ¹³ Mattingly et al, 2023.



Affordability and Innovation Are Not Mutually Exclusive

PRESERVING INNOVATION

- Time-limited exclusivity
- Adequate returns
- Incentives for high-risk research
- Public and private research and development investment

IMPROVING AFFORDABILITY

- Generic/biosimilar competition
- Differential pricing
- Voluntary licensing
- Value-based agreements
- Pooled procurement
- Public/nonprofit research support

¹⁴ World Health Organization, 2020; ¹⁵ Moon et al, 2011; ¹⁶ Morin et al, 2022.



Global Strategies Use Different Mechanisms

Strategy	Access mechanism	Limitation
Differential pricing	Adjusts to purchasing capacity	May remain unaffordable
Generic/biosimilar competition	Lowers prices through entry	Needs viable supply
Voluntary licensing	Authorizes lower-cost production	Coverage may be limited
Pooled procurement	Strengthens purchasing power	Needs coordination
Public subsidy/community delivery	Reduces cost and distance	Needs durable financing

Successful programs combine pricing, financing, distribution, and education.



¹⁴ World Health Organization, 2020; ¹⁵ Moon et al, 2011; ¹⁶ Morin et al, 2022; ¹⁷ Burrone et al, 2019.

Medicines Patent Pool: Partnership at Scale

HOW IT WORKS

Patent holder

→ Medicines Patent Pool

→ Qualified generic manufacturers

→ Affordable supply in Low- and Middle-Income Countries (LMICs)

129 COUNTRIES

- Received affordable generic dolutegravir by the end of 2024

LESSON

- Design affordability, availability, partnership, and scale together

¹⁶ Morin et al, 2022; ¹⁷ Burrone et al, 2019; ¹⁸ Medicines Patent Pool, 2025.



Arogya Parivar: Designing Around Rural Barriers

CONNECTED MODEL

- Awareness — education
- Accessibility — camps/referrals
- Availability — local networks
- Affordability — lower-cost medicines

COMPANY-REPORTED REACH

- 33,000 villages
- ~42 million people
- Self-sustaining in <3 years

¹⁹ Novartis, 2021; ²⁰ Rockers et al, 2017.



Public Systems Connect Financing With Delivery

Program	Mechanism	Access lesson
Farmácia Popular-Brazil	Public subsidy via pharmacies	Uses existing pharmacy network
Thailand UCS	Coverage + strategic purchasing	Financial protection by design
Rwanda	Community insurance + local delivery	Bring care closer
Shared lesson	Connect financing and delivery	Price alone is insufficient
Context	Models are not directly transferable	Adapt locally

²¹ Emmerick et al, 2020; ²² Tangcharoensathien et al, 2015; ²³ Lu et al, 2012.

A program is complete only when the patient can receive treatment.



Who Experiences BoP-Like Barriers in the United States?

- Uninsured or underinsured
- Rural or medication desert communities
- Low income or Medicare beneficiaries
- Limited English proficiency
- High-deductible plan members
- Transportation disability or housing barriers

The U.S. is not a BoP market; some groups experience BoP-like barriers.

¹ Mykyta, Cohen, 2023; ³ Syed et al, 2013; ⁵ Bradshaw et al, 2007; ²⁴ Wittenauer et al, 2024; ²⁵ Rastas et al, 2022.



U.S. Approaches Address Different Pieces of Access

Initiative	Barrier addressed	Limitation
Generics	Product price	Supply can be fragile
Biosimilars	High biologic spending	Uptake/contracting
Patient assistance	Individual affordability	Eligibility complexity
FQHCs* + 340B	Safety-net access/acquisition	Savings ≠ patient affordability
Transparent cash models	Price transparency	Limited scope; bypasses insurance

*FQHCs: Federally Qualified Health Centers

Biologics represented
≈5% of prescriptions
but 51% of U.S. drug
spending in 2024.

⁴ FDA Drug Shortages Task Force, 2020; ²⁶ US Food and Drug Administration, 2025; ²⁷ Health Resources and Services Administration; ²⁸ Kouzy et al, 2024.



U.S. Drug-Affordability Policy in 2026

MEDICARE NEGOTIATION

- First 10 Maximum Fair Prices effective January 1, 2026

PBM* SCRUTINY

- Federal Trade Commission reports address concentration, markups, formulary incentives, and pharmacy reimbursement

INSULIN

- Medicare cap: lesser of \$35, 25% of MFP, or 25% of plan-negotiated price

TARIFFS

- Certain patented imports affected; generics and biosimilars currently exempt

*PBM: Pharmacy Benefit Managers

²⁹ CMS, 2024; ³⁰ CMS, 2025; ³¹ Federal Trade Commission, 2024; ³² The White House, 2026.



Applying BoP Principles to Pharmacy

BoP principle	Pharmacy application
Innovation	Redesign around barriers
Local engagement	Adapt to community needs
Partnership	Connect key stakeholders
Scalability	Standardize workflows
Sustainability	Finance, staff, and measure

**Build sustainable
access pathways.**

Conceptual basis: ⁷ Prahalad, Hart, 2002; ⁹ London, Hart, 2004; ¹⁰ Simanis, Hart, 2008.



Design Access—Do Not Wait for Failure

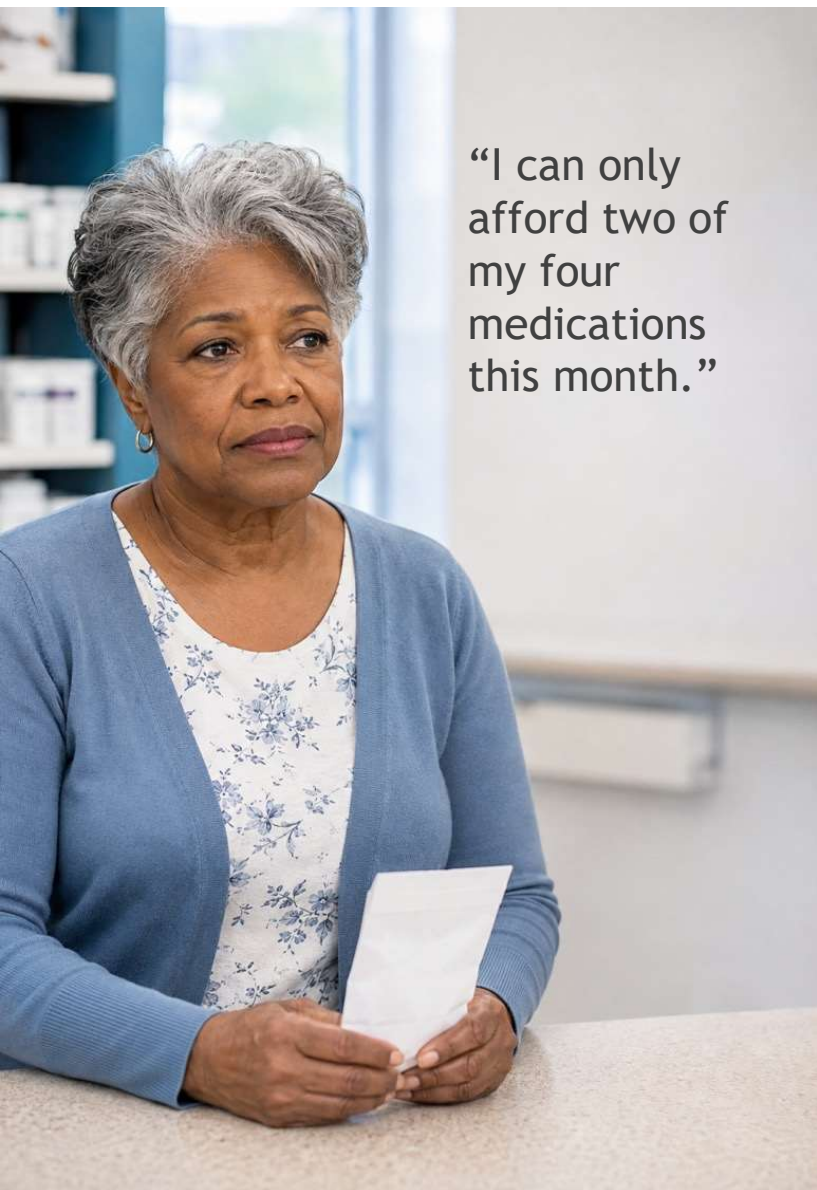
REACTIVE RESPONSE

- Address cost at pickup
- Focus on the product
- Respond to one barrier
- Depend on individual workarounds
- Measure transactions

BoP-INFORMED RESPONSE

- Identify risk earlier
- Consider the patient journey
- Address interconnected barriers
- Create standardized pathways
- Measure continuity and outcomes





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Mrs. Johnson, 62 years old

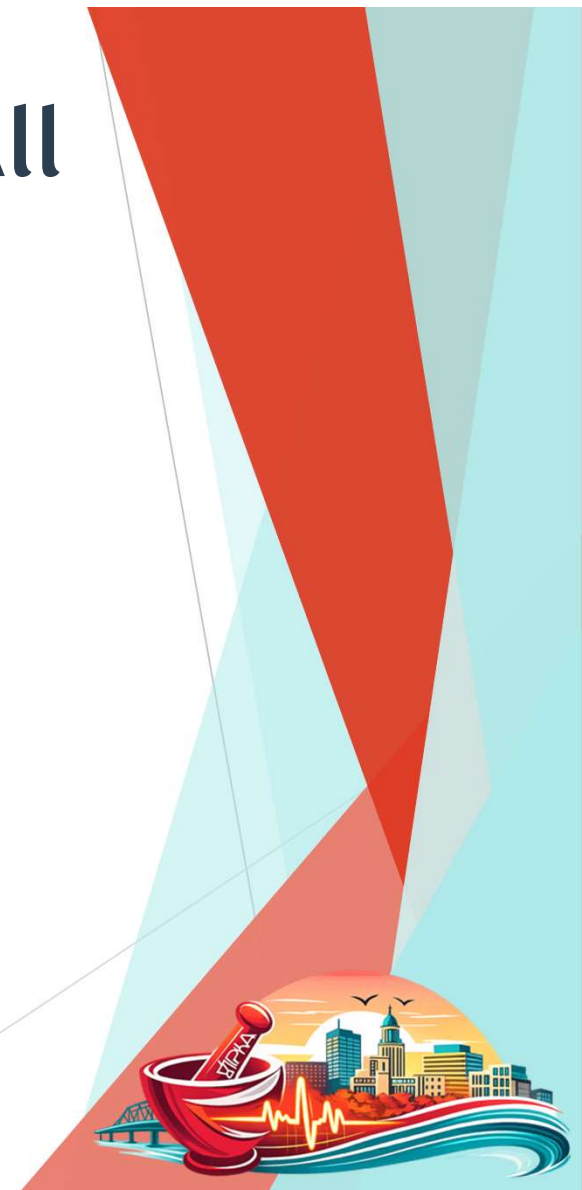
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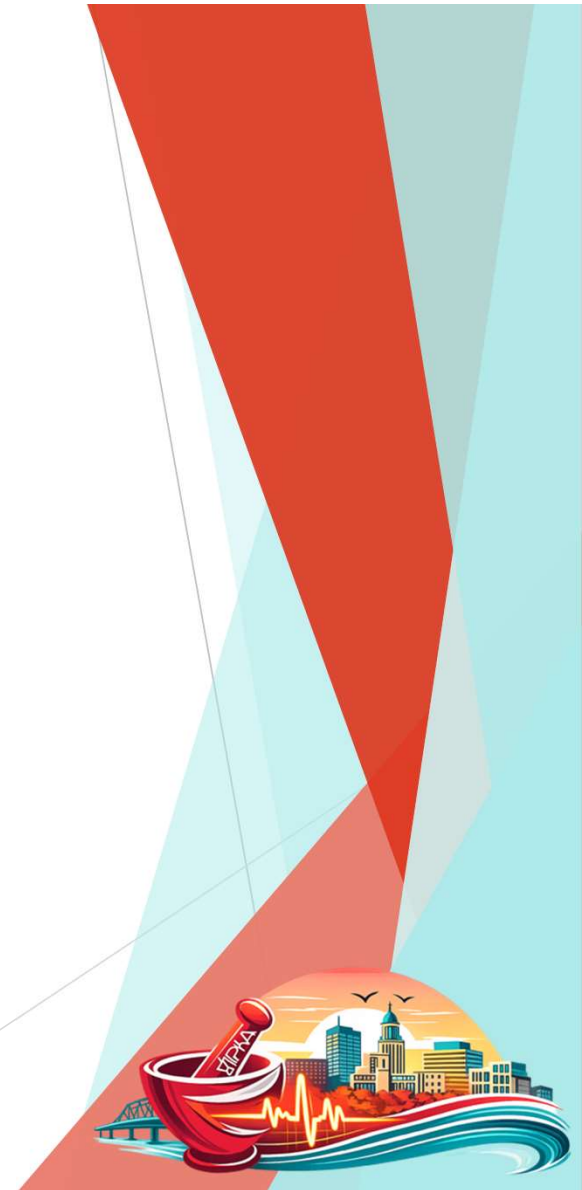


Limitations and Research Gaps

- BoP originated in business strategy—not clinical pharmacy
- Global programs are highly context-dependent
- Some evidence relies on organization-reported outcomes
- Increased reach does not automatically equal equity
- The five dimensions require further validation and measurement

Research priorities: cost-barrier screening, pharmacy workflows, telepharmacy equity, continuity, patient outcomes, and whether savings reach patients.

⁶ Levesque et al, 2013; ⁷ Prahalad and Hart, 2002; ²⁰ Rockers et al, 2017.



Take-Home Messages

1. BoP applies innovation, partnership, local relevance, scale, and sustainability to the needs of underserved populations.
2. Successful programs connect price with financing, supply, distribution, and education.
3. Affordability is essential—but only one dimension of medication access.
4. Equitable pricing can reduce financial barriers, but meaningful access also requires reliable supply, distribution, awareness, and acceptable care.



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Thank You

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