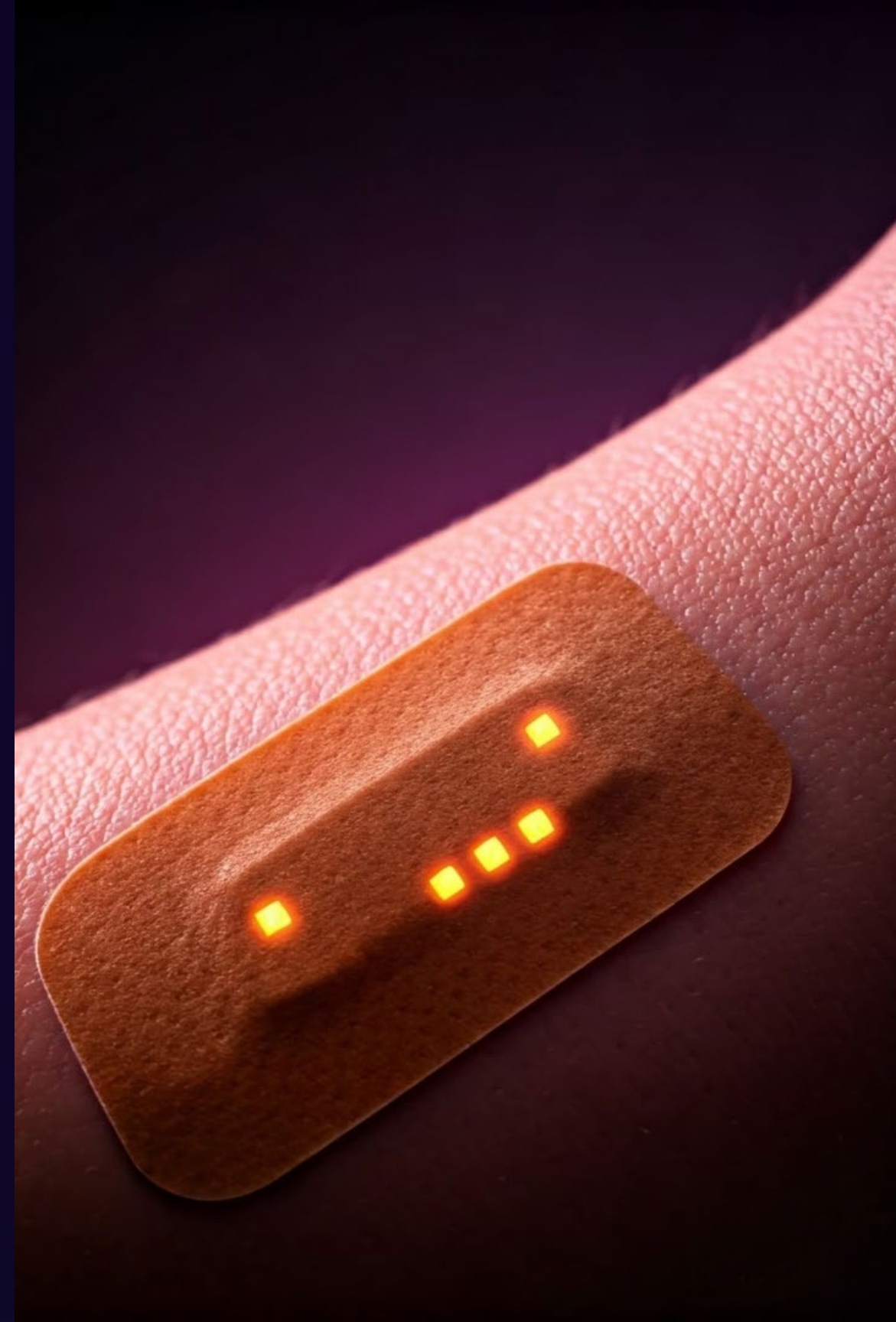


# AI-Enhanced Transdermal Patches for Drug Delivery

Revolutionizing drug administration with intelligent technology that bridges healthcare and artificial intelligence. Our smart patches represent the next frontier in precision medicine delivery.

clinotech



# The Need for Smarter Drug Delivery

**50%**

## Non-adherence

WHO reports half of patients skip oral medications

**133M+**

## Chronic Patients

Americans requiring long-term medication

**24hr**

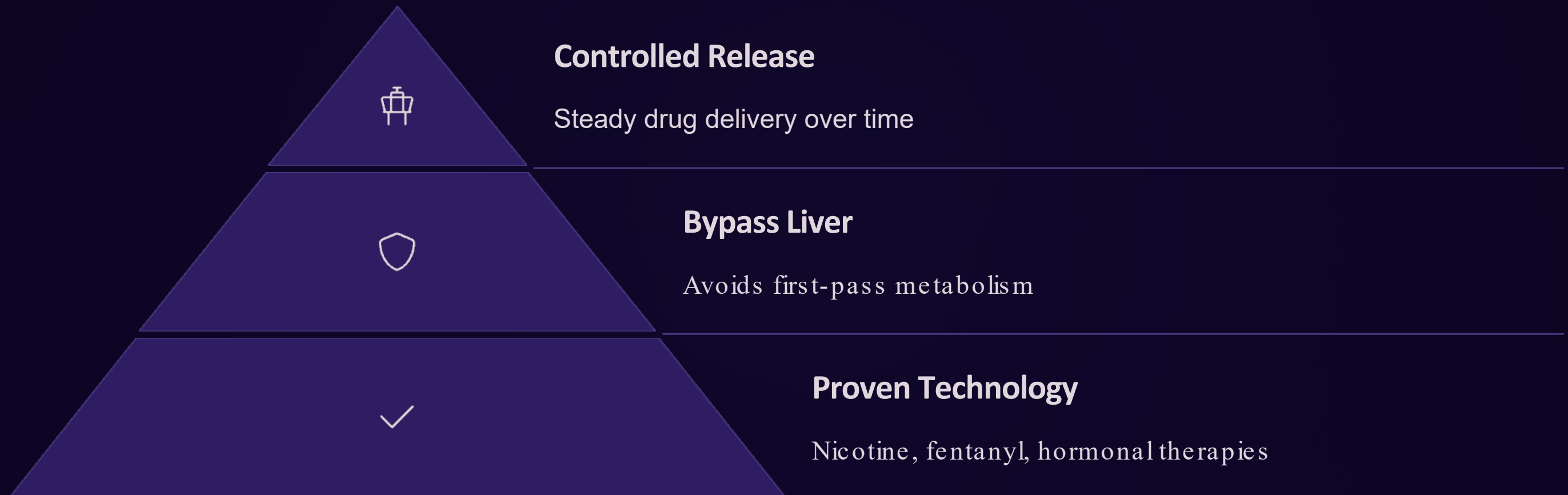
## Consistent Levels

Need for steady drug concentration

clinotech



# Fundamentals of Transdermal Patch Technology



# Advantages Over Traditional Drug Delivery



## Avoids Digestive Breakdown

Bypasses stomach acids and liver metabolism. Preserves medication potency for better effectiveness.



## Extended Duration

Reduces dosing frequency from multiple times daily to weekly. Decreases plastic packaging and medical waste.

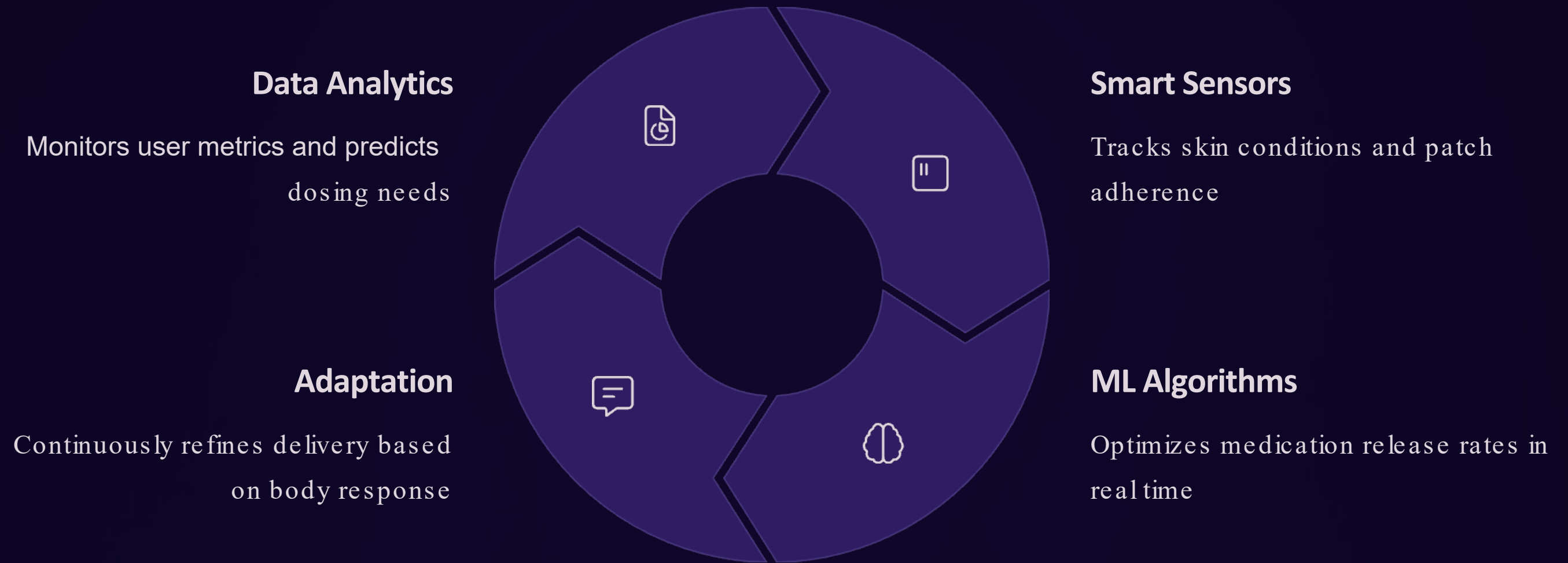


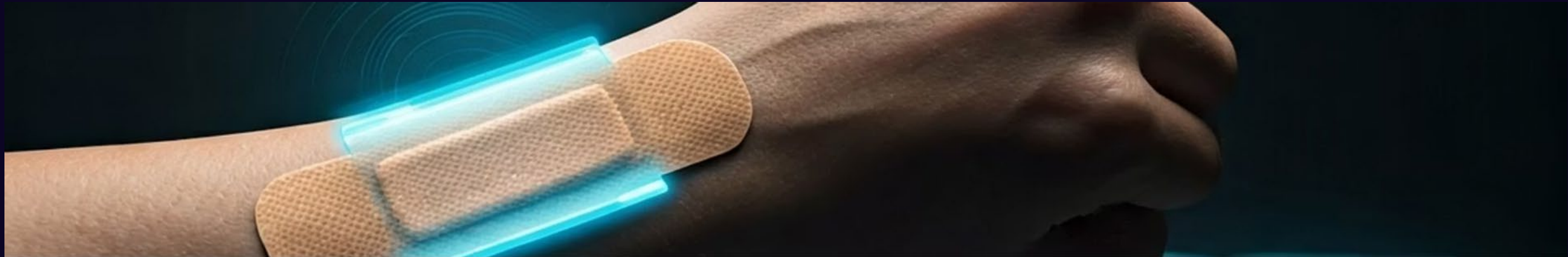
## Patient-Friendly

Eliminates needles and pills. Improves compliance for children, elderly, and needle-phobic patients.



# Introducing AI in Transdermal Systems





# Smart and AI-Integrated Patches: The Next Generation

## Traditional Patches

Fixed drug reservoir with passive diffusion. Predetermined release rate without adjustment capability.

1

## AI-Enhanced Patches

Real-time physiological monitoring. Machine learning algorithms adjust dosing dynamically.

3

## Current Smart Patches

Basic sensors for temperature and pH. Limited feedback mechanisms for drug release.

2

# Clinical Applications: Case Examples



## Diabetes Management

AI-adjusted insulin delivery reduced hypoglycemic events by 30%



## Chronic Pain Control

Fentanyl patches with AI regulation minimize overdose risk



## Hormone Therapy

Adaptive dosing improves symptom management for patients



# Clinotech Innovative Applications:



## Infectious Disease Management

Malaria, Tuberculosis (TB), TB + HIV Co-infection, Dengue Fever, others.



## Chronic Diseases

Asthma, Chronic Obstructive Pulmonary Disease (COPD), Epilepsy, Parkinson's Disease, others.

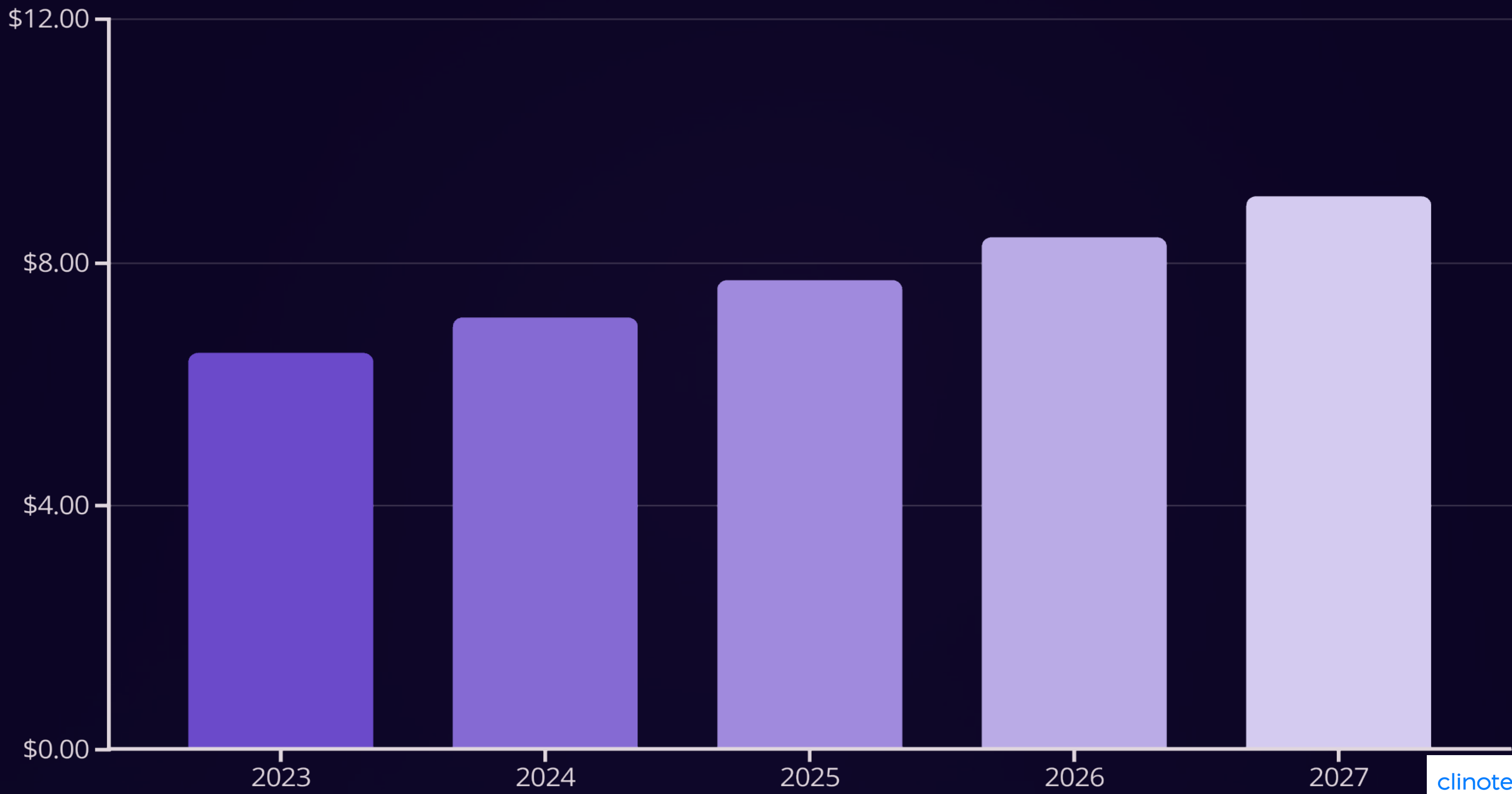


## Harm Reduction & Overdose Protection in Substance Abuse

Opioates and non-opioates, others.



# Market Trends & Industry Landscape





# Challenges and Regulatory Considerations

## Data Privacy Concerns

Wearable patches collect sensitive health information. Questions remain about data ownership and cybersecurity protocols.

## Regulatory Hurdles

FDA and EMA developing frameworks for AI-enhanced medical devices. Classification remains complex for hybrid technologies.

## Biocompatibility Issues

Skin irritation affects 10-20% of users. Advanced materials needed to house electronics while maintaining comfort.

# The Future: Toward Precision Precision Medicine

## Personalized Dosing

AI algorithms will analyze individual patient data. Patches will deliver truly customized treatment regimens.

## Expanded Applications

Oncology and neurodegenerative treatments through smart patches. Complex biologics delivery becoming possible.

## Healthcare Economics

Potential for 15-20% reduction in chronic disease management costs. Better outcomes with fewer hospitalizations.



# INNOVATIVE TEAM



Meet the healing hearts and brilliant minds behind our medical excellence.



**Dr. Harrison Ofiyai, MD, Ph.D.**  
**CEO**



**Mike Qureshi**  
**CTO**



**Ravi Gaikwad, Ph.D.**  
**CSO**



**Moktar Chowdhry, Ph.D.**  
**R&D Project Scientist**

[www.clinotech.com](http://www.clinotech.com)

[hello@clinotech.com](mailto:hello@clinotech.com)

**clinotech**