

# Playful

**HARNESSING THE POWER OF PLAY**  
FOR ADOLESCENTS TO LIVE HAPPIER & HEALTHIER LIVES

# PROBLEMS WE ARE SOLVING

EVERY YEAR IN THE US:

**2M+** ADOLESCENTS STRUGGLE WITH SUBSTANCE MISUSE

**5M** YOUTH HAVE AT LEAST 1 MENTAL HEALTH ISSUE

**10M** ADOLESCENTS CONTRACT AN STI

SCARCITY OF SUPPORT:

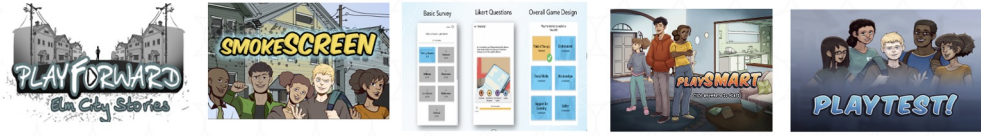
1:491 SCHOOL COUNSELOR TO STUDENT

1:1381 SCHOOL PSYCHOLOGIST TO STUDENT

# MILESTONES OF THE PLAY2PREVENT LAB → PLAYBL

PLAYBL IS A BEHAVIORAL HEALTH COMPANY THAT MARKETS & DISTRIBUTES EVIDENCE-BASED SERIOUS GAMES THAT PREVENT & REDUCE ADOLESCENT RISK BEHAVIORS

5



VIDEOGAMES DEVELOPED & VALIDATED IN RCTS, LARGE FIELD STUDIES, AND 5 PILOTS

420K

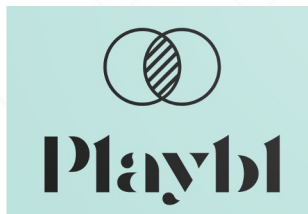
TEENS GIVEN LOGINS FOR THE GAMES

40K

DOWNLOADS ON THE APP STORE

\$15M

SUPPORT IN NIH & FOUNDATION FUNDING



PLAYBL SPUN-OUT FROM YALE P2P LAB,  
INCORPORATED, PAYING CUSTOMERS



# MARKET

SERIOUS GAMES "HAVE AN EXPLICIT AND CAREFULLY THOUGHT-OUT EDUCATIONAL PURPOSE"

**\$10.2B**

MARKET GROWTH  
IN 2023;  
COMPOUND  
ANNUAL GROWTH  
RATE OF 23%

**40M**

ADOLESCENTS  
10-20 YEARS OLD

**42K**

SECONDARY &  
COMBINED SCHOOLS



COMMERCIAL  
PAYORS

**13K**

SCHOOL DISTRICTS

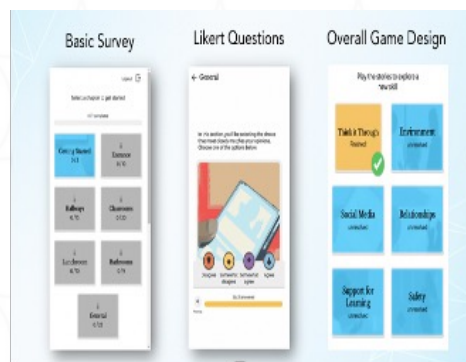


FAMILIES

# PRODUCTS: EVIDENCE-BASED GAME PORTFOLIO



MENTAL HEALTH  
AND OPIOID  
MISUSE



MENTAL HEALTH &  
WELLNESS



RISK REDUCTION/  
HIV PREVENTION



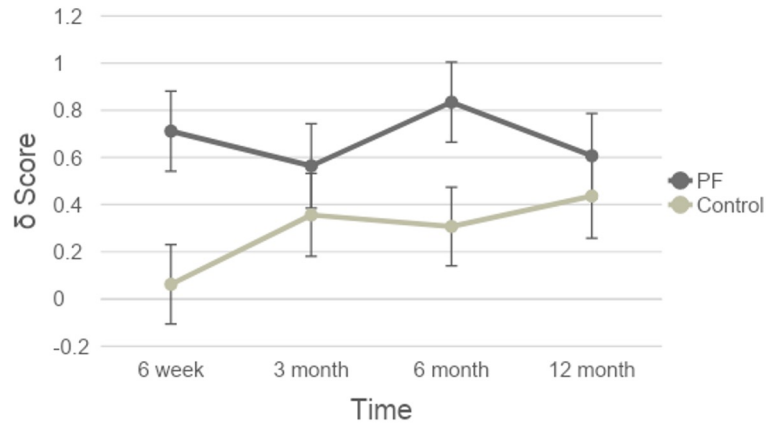
SMOKING & VAPING



HEALTH ADVOCACY  
STI/HIV TESTING

# EXAMPLES OF EVIDENCE BEHIND THE GAMES

Attitudes score: change since baseline

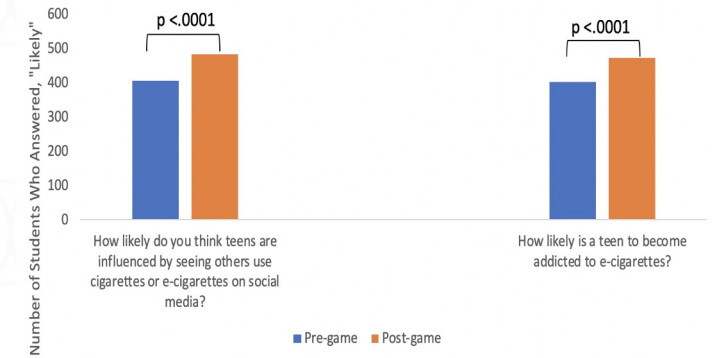


Overall:  $P = .04$

Table 3. Association of game play with gains in substance use knowledge.

Substance use knowledge	B	SE	$\beta$	$t_{102}$	P
<b>3 Month</b>					
Number of levels beaten	.31	0.06	.49	5.12	.001
Number of hours playing game	-.07	0.07	-.09	-1.00	.32
Baseline knowledge	.35	0.10	.28	3.47	.001
Age	.38	0.18	.16	1.85	.07
<b>6 Month</b>					
Number of levels beaten	.11	0.05	.18	2.19	.03
Number of hours playing game	-.02	0.05	-.03	-0.35	.71
3-month knowledge	.72	0.07	.74	10.23	.001
Age	-.13	0.13	-.06	-0.98	.33

Increase in Negative Beliefs About Tobacco Products  
Pre-game to Post-game



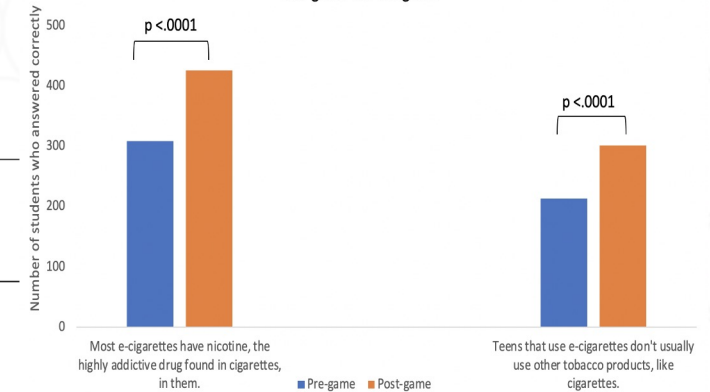
Using Videogame Apps to Assess Gains in Adolescents' Substance Use Knowledge: New Opportunities for Evaluating Intervention Exposure and Content Mastery

Erika Montanaro<sup>1</sup>, PhD (HK), M Paed De; Lynn E Fiellin<sup>2</sup>, MD; Tamer Fakhouri<sup>1</sup>, MD; Tassos C Kyriakides<sup>1</sup>, PhD (HK), M Paed De; Lindsay R Duncan<sup>1</sup>, PhD (HK), M Paed De

Table 2 Evaluation of assessment validity

	Scores baseline, mean (SD)	Scores (post-gameplay, 3 weeks), mean (SD)	Scores (follow-up, 6 weeks), mean (SD)	Number of participants tested for HIV (baseline)	Number of participants tested for HIV (post-gameplay, 3 weeks)	Number of participants tested for HIV (follow-up, 6 weeks)	P value
Intentions	2.81 (0.89)	3.28 (0.92)	3.15 (0.81)	-	-	-	.037
Knowledge	17.44 (4.30)	21.13 (3.83)	21.13(2.85)	-	-	-	.025
Perceived Susceptibility	0.06 (0.24)	0.22 (0.55)	0.11 (0.32)	-	-	-	0.390
Attitudes	2.18 (0.77)	2.30 (0.60)	2.19 (0.58)	-	-	-	0.323
Behavior	-	-	-	0	0	2	0.135

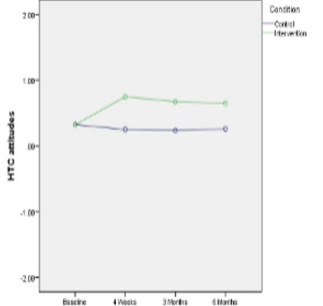
Increase in Knowledge About Tobacco Products  
Pre-game to Post-game



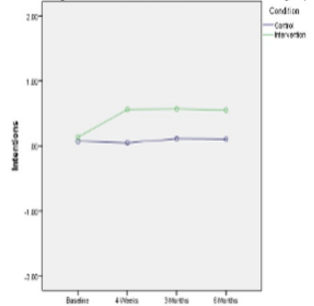
Video Game Intervention for Sexual Risk Reduction in Minority Adolescents: Randomized Controlled Trial

Lynn E Fiellin<sup>1,2,3,4</sup>, MD; Kimberly D Hieftje<sup>1,3,4</sup>, PhD; Tyra M Pendergrass<sup>1,3,4</sup>, MEM; Tassos C Kyriakides<sup>5</sup>, PhD; Lindsay R Duncan<sup>1,6</sup>, PhD; James D Dziura<sup>7</sup>, PhD; Benjamin G Sawyer<sup>1,7</sup>; Linda Mayes<sup>2,4</sup>, MD; Cindy A Crusto<sup>3,4,8</sup>, PhD; Brian WC Forsyth<sup>1,4</sup>, MBChB, FRCPC; David A Fiellin<sup>1,3,4,5</sup>, MD

Change in HTC attitudes over time for intervention and control groups



Change in intentions over time for intervention and control groups



Videogame intervention to encourage HIV testing and counseling among adolescents

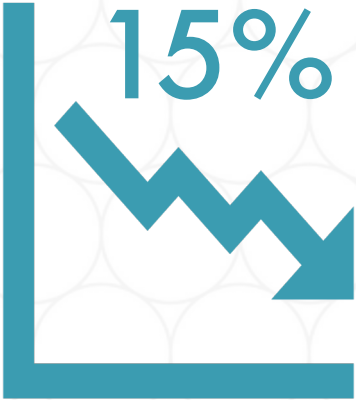
Tyra Pendergrass<sup>1</sup>, Kimberly Hieftje<sup>2</sup>, Lindsay Duncan<sup>1</sup>, Lynn Fiellin<sup>1</sup>  
<sup>1</sup>Yale Center for Health and Learning Games, Yale School of Medicine, New Haven, CT, USA; <sup>2</sup>Department of Kinesiology and Physical

Effectiveness of a web-based tobacco product use prevention videogame intervention on young adolescents' beliefs and knowledge

Kimberly D. Hieftje, Claudia-Santi F. Fernandes, I-Hsin Lin & Lynn E. Fiellin

# EACH PLAYBL GAME PROVIDES EXTENSIVE HEALTH AND COST BENEFITS

RISK OF MISUSE



VALUE OF AVERTING 1 OPIOID USE DISORDER

AGE 16-19 (SOURCE: MURPHY, 2020)

**\$390K**

HEALTHCARE SECTOR

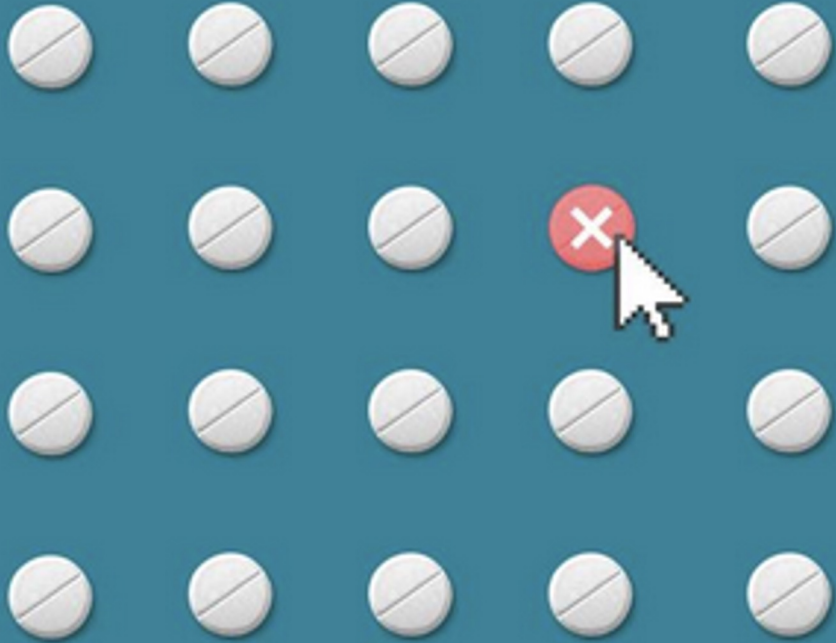
**\$525K**

TAXPAYER

**\$3.45M**

SOCIETY

# OUR IMPACT



**A Yale doctor is using a video game to fight the opioid crisis**

Washington Post

# PROTECTING YOUTH MENTAL HEALTH

*The U.S. Surgeon General's Advisory*

2021



# HOW WE MAKE MONEY

SALES EFFORTS ARE DIRECTED AT EDUCATORS, SCHOOL ADMIN DURING SUMMER & FALL TO MEET FUNDING CYCLES; PIVOT TO CLINICS/PAYORS

**PRICING BASED ON CUSTOMER TYPE:**

**INDIVIDUAL PRICING IF <500 USERS:**  
HIGHER TIERED PRICING PER USER/PER GAME/YEAR

**ENTERPRISE PRICING: TBD**

**FOR ACCESS TO:**  
UNLIMITED GAMES  
USER DATA  
TECH SUPPORT



# CUSTOMERS TO DATE



TOTAL # OF CUSTOMERS TO DATE: 11

TOTAL # OF SUBSCRIPTIONS: 422

TOTAL REVENUE SINCE SALES EFFORTS IN AUGUST 2022: \$6800



## ONGOING NEGOTIATIONS:

- CDC (~ 1,000 ORGS AROUND THE COUNTRY)
- NEW CHARTER SCHOOL ORGANIZATION
- BOYS & GIRLS CLUBS
- CIGNA (EVERNORTH)
- KAISER PERMANENTE



# CURRENT TEAM



**LYNN E. FIELLIN, MD**

FOUNDER  
FOUNDING DIRECTOR, P2P  
LAB  
YALE PROFESSOR, MEDICINE,  
CHILD STUDY CENTER,  
PUBLIC HEALTH



**ANUSHA RAJA, MD, MBA**

VICE PRESIDENT, OPERATIONS  
PHYSICIAN, VANDERBILT  
UNIVERSITY MEDICAL CENTER



**ALEX MUKHERJEE**

BUSINESS DEVELOPMENT  
CONSULTANT  
FORMER EDUCATOR



**ELIZABETH CHO-  
FERTIKH, PHD**  
CO-FOUNDER,  
MEDA ANGELS



**STEVE  
ARNOLD, PHD**  
CO-FOUNDER/  
PARTNER  
EMERITUS,  
POLARIS  
PARTNERS



**JOSEPH  
SOUTH, PHD**  
CHIEF  
LEARNING  
OFFICE,  
ISTE

## ADVISORS



**ROBERT  
GEHORSAM**  
EDTECH, GAMES  
ENTREPRENEUR &  
EXECUTIVE



**STEPHANIE J.  
HULL, PHD**  
PRESIDENT/CEO,  
GIRLS, INC.

# NON-DILUTIVE FUNDING: YALE BLAVATNIK AWARD

- **FUNDED: \$200,000:**
  - **PHASE 1: COMPLETED, \$60,000**
    - DATA DASHBOARD WITH DELOITTE (USER ENGAGEMENT DATA)
    - CUSTOMER DISCOVERY SURVEY
  - **PHASE 2: \$60,000**
    - DATA DASHBOARD <-> SERVER INTEGRATION: COMPLETED
    - USER PILOTS WITH 3 SCHOOLS: PENDING
  - **PHASE 3: \$80,000**
    - DEVELOP "CLOSED LOOP" ENROLLMENT SYSTEM TO COLLECT CUSTOMER ENROLLMENT METRICS AND OPTIMIZE DELIVERY OF GAMES DASHBOARD: PENDING

# MILESTONES

YEAR 1  
2022-2023

YEAR 2  
2023-2024

YEAR 3-4  
2024-2026

## ACHIEVEMENTS



YALE BLAVATNIK PRIZE

CT INNOVATOR  
AWARD

CUSTOMER PAYMENTS  
RECEIVED

GSV CUP ELITE 200

PRIMARY VC  
FOUNDERS  
FELLOWSHIP

I2I GRANT

## TALENT



**RECRUIT  
CEO**

BUSINESS DEV  
CONSULTANT

SOFTWARE  
DEVELOPER

## BUILD



DATA  
DASHBOARD

SERVER  
DASHBOARD  
INTEGRATION

ENROLLMENT  
SYSTEM

## SALES



CUSTOMER  
DISCOVERY  
SURVEY

PILOT WITH  
SCHOOLS

Y1: 500  
SCHOOL  
SALES

## PARTNERS



PARTNER WITH  
INSURERS,  
HEALTH ORGS

Y2: 720  
SCHOOL SALES

## DIGITAL BIOMARKERS



DEVELOPMENT  
OF DIGITAL  
BIOMARKERS

PREDICTIVE  
MODELING FOR  
FUTURE RISK

## EXPANSION



EXPAND TO ALL US  
SCHOOL DISTRICTS,  
MAJOR INSURERS,  
HEALTH ORGS

EXPAND  
INTERNATIONALLY

REVENUE + BLAVATNIK FUNDS + **SEED FUNDING**



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



**HARNESSING THE POWER OF PLAY  
FOR ADOLESCENTS TO LIVE HAPPIER & HEALTHIER LIVES**

The New York Times

Google

NBC UNIVERSAL

The Washington Post

NIH  
National Institute  
on Drug Abuse

SCHOOL-BASED  
HEALTH ALLIANCE  
Redefining Health for Kids and Teens

Yale University  
School of Medicine

CVS Health  
FOUNDATION