PROJECT FIRSTLINE
FIVE-YEAR REVIEW REPORT
2021 – 2025

PROJECT FIRSTLINE
CDC's National Training Collaborative for Healthcare Infection Prevention & Control

NJHealth
New Jersey Department of Health

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List of Abbreviations and Acronyms

CDC	Centers for Disease Control and Prevention
CDS	Communicable Disease Service
CE	Continuing education
ICAR	Infection Control Assessment & Response
HAI/AR	Healthcare-Associated Infections & Antimicrobial Resistance
IPC	Infection prevention and control
LNA	Learning needs assessment
NJDOH	New Jersey Department of Health
NJLINCS	New Jersey Local Information Network and Communications System
PFL	Project Firstline

Project Firstline Introduction

The New Jersey Department of Health (NJDOH) Communicable Disease Service (CDS) is collaborating with the Centers for Disease Control and Prevention's (CDC's) Project Firstline (PFL), a national initiative designed to provide trainings and additional education and tools regarding infection prevention and control (IPC) practices to frontline healthcare workers. Our goal is to provide foundational knowledge of infection prevention and control measures and emphasize the importance of implementing these protocols throughout the workday to ensure best practice in healthcare settings. This initiative aims to help every healthcare worker gain confidence to apply infection prevention and control principles in their work setting to protect themselves, their patients and the community from infectious disease threats.

The purpose of this report is to highlight PFL's IPC training efforts and methods across New Jersey and to advocate for the increase of accessibility, usability, and cultural sensitivity in health education can be more effective and equitable. The report recounts key training events in chronologically from 2021 to 2025.

6,810 **healthcare professionals trained** across **166** **IPC-facilitated trainings**

94% of respondents were highly satisfied with the presenters' presentation quality

92% of respondents indicated high relevancy of IPC-facilitated training to their career

92% of respondents indicated their overall understanding increased after IPC-facilitated training

94% of respondents would recommend a PFL training to others

32% of knowledge was gained from the pre-test to the post-test, cumulatively

CDC's Continuing Education (CE) Pilot Program

In late 2021, the PFL team in collaboration with PFL Virginia, received an invitation from the CDC PFL leadership to participate in a Continuing Education (CE) pilot program. The purpose of this pilot was to determine CDC PFL's capacity to offer CEs to all 64 PFL jurisdictions who wished to offer them for their IPC trainings. This one-month initiative took place in February 2022 and comprised of three virtual training sessions. The selected topics, including *Asymptomatic Spread of COVID-19, Cleaning and Disinfection,* and *Gowns and Gloves*, were mutually agreed upon by both jurisdictions.

CDC PFL was successfully able to award nursing (CNE), physician (CME), and pharmacist (CPE) credits to eligible healthcare professionals who attended our trainings. The training series attracted a total of 740 healthcare and public health professionals, and its success was attributed to strategic promotional efforts, including the distribution of promotional flyers via Constant Contact to healthcare partners and the New Jersey Local Information Network and Communications System (NJLINCS).

To obtain CE credits, participants were required to complete pre- and post-tests for each training session they attended. Most of our participants identified as registered nurses (32%), public health professionals (30.1%), and healthcare administrators (20%). Despite offering CME and CPE credits, a low number of physicians and pharmacists participated in the training series.

Regarding workplace settings, 35.7% of our participants worked in an "other workplace" setting which included school districts and universities. 27.6% of participants were from health departments

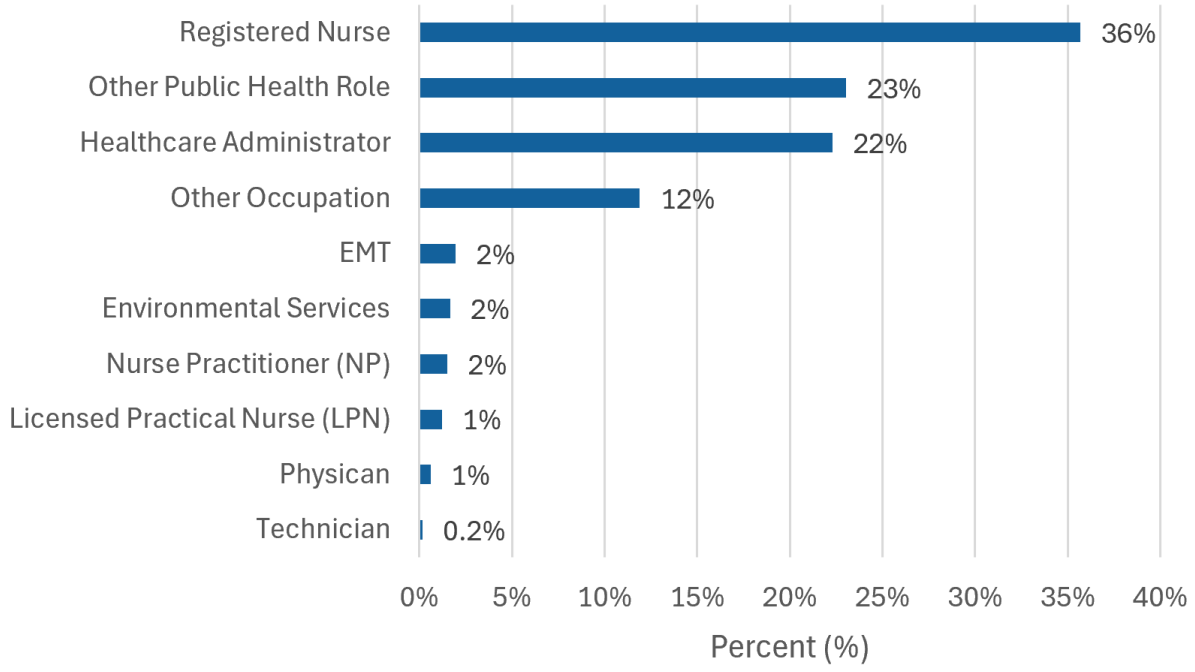


Figure 1. Total number of CEU participants by occupation. Excluded physician, technician, laboratory staff, non-clinical support staff, nursing/ medical assistant, pharmacist, physician assistant, social and community services, and therapist due to low participation rate (≤1%).

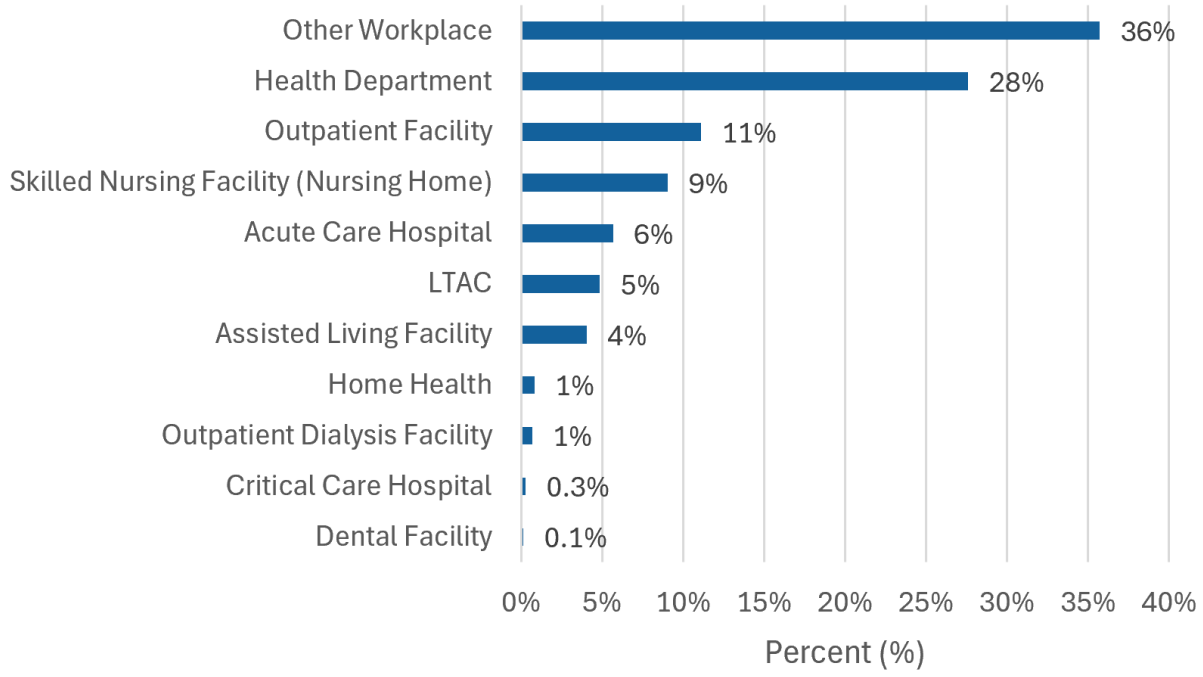


Figure 2. Total number of CEU participants by workplace setting. Excluded pharmacy, dental facility, critical care hospital, and outpatient dialysis facility due to low participation (≤1%).

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which included state, territorial, local and tribal. Lastly, 11.1% of participants were from other outpatient facilities.

Feedback from our post-test evaluation revealed positive responses, highlighting the enjoyment of CDC PFL's educational videos, effective interaction between hosts and participants, appropriate training length, clear presentations, and appreciation for educational handouts provided at the conclusion of each training.

Participants shared major takeaways from each session, such as the reasons for not double-gloving, understanding the different contact times for different disinfecting products and what viruses they are intended to kill, and differentiating between pre-symptomatic and asymptomatic individuals in relation to COVID-19.

In conclusion, the CDC expressed satisfaction with the pilot's outcome and the significant attendance it generated. However, the anticipated extension of CE offerings to other PFL jurisdictions did not materialize after the conclusion of the pilot program.

Hackensack Meridian Health (HMH) Network Partnership

Fortifying Healthcare Excellence: "A Collaborative IPC Training Partnership to Support Hackensack Meridian Health Team Members"

In the fall of 2021, the PFL team successfully initiated its first IPC training. To maximize outreach, the team employed various marketing channels while offering IPC-training related services through an intake form. This form was designed to enhance and streamline facility efforts in requesting PFL training. It encompassed questions such as respondent information, training preferences, preferred method and platform, desired length, event-specific details, and additional resource requirements/needs.

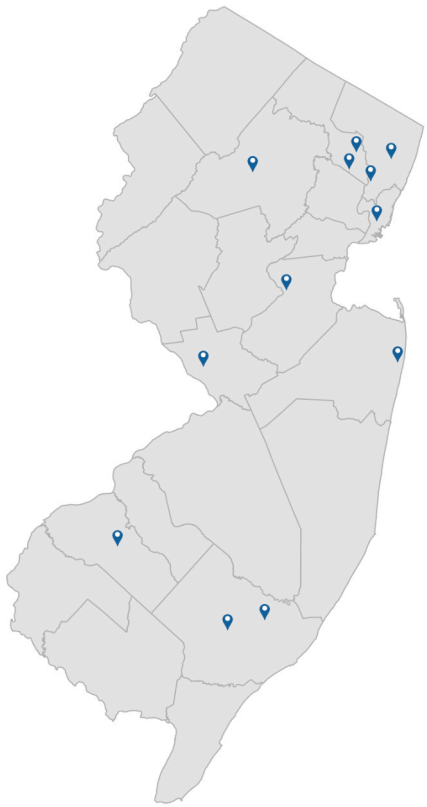
During the initial outreach, PFL engaged with two facilities within the Hackensack Meridian Health (HMH) network. Following site visits, PFL not only received positive feedback but also secured an invitation to extend our IPC education to other HMH sites across New Jersey. By early 2022, PFL had established a strong relationship with HMH leadership, leading to a plan to conduct monthly IPC training events across ten HMH sites in New Jersey, reaching a wider audience.

The collaborative mission aimed to support onsite infection preventionists (IPs) in delivering IPC education, and support reducing the spread of infectious disease threats in acute care settings. The goal was to enhance knowledge and confidence among staff, extending our reach to include ancillary support staff.

The one-hour training sessions covered a diverse range of IPC topics, activities, and demonstrations, including *COVID-19's Impact on Antibiotic Resistance, Recognizing Risk using Reservoirs, "How Did the Germ Spread" activity, Hand Hygiene, Glo-Germ activity, Cleaning and Disinfection, High touch surfaces activity, Personal Protective Equipment (PPE)*, and a *Donning and Doffing demonstration*.

The partnership offered multiple free one-hour live, in-person training sessions at one site per month. Each site had the flexibility to schedule up to six sessions on Tuesdays and Thursdays, accommodating all staff shifts. Following the completion of the scheduled HMH training site visits in December 2022, a live virtual training was promoted and extended to all HMH team members regardless of any previous PFL visit.

Key achievements included training 1,118 HMH team members, encompassing ancillary staff.



The ten HMH sites included:

- Hackensack University Medical Center
- Raritan Bay Medical Center
- Old Bridge Medical Center
- Riverview Medical Center
- Palisades Medical Center
- Southern Ocean Medical Center
- Jersey Shore University Medical Center
- JFK University Medical Center
- Bayshore Medical Center, Carrier Clinic
- Ocean University Medical Center



Healthcare workers participating in an IPC training at Palisades Medical Center

Evidently, there was a significant 50.4% increase in knowledge and an impressive 96.7% in overall self-efficacy. Through engagement with key HMH team members, PFL successfully collaborated on creating HMH Spotlights and collaborative Hand Hygiene and PPE videos. These visual demonstrations were designed to guide frontline healthcare workers in proper IPC practices and have become integral components of virtual and in-person training sessions, as well as promotional and educational materials shared through social media.

Collaborating with one of New Jersey's largest healthcare systems provided valuable insights for improvement strategies and spurred the initiation of our train-the-trainer pilot. Inspired by this success, PFL eagerly anticipate further opportunities to partner with other large healthcare facilities in the future. For additional details, you can explore our joint press release with NJDOH and HMH here.

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Unlocking Teamwork and Resilience

Bringing the Project Firstline Escape Room to Healthcare Heroes

The PFL Escape Room is an interactive superhero-themed IPC activity that you can complete with your colleagues and staff to emphasize key IPC practices. Using the CDC's PFL educational material, the PFL Escape Room was developed to support frontline healthcare workers with an additional path to learning about IPC using a hands-on, problem-solving, and skill-building approach. The PFL Escape Room addresses standard precautions, or IPC practices, designed to protect healthcare workers and patients from infectious disease threats in a healthcare setting. The activity covers four key standard precautions: *hand hygiene, source control, personal protective equipment (PPE)*, and *cleaning and disinfection.* This health education product creates a simulated environment that reinforces key infection control actions that help participants develop the skills and self-efficacy to sustain that behavior.

> *"This [program] creates a simulated environment that reinforces key infection control actions that help participants develop the skills and self-efficacy to sustain that behavior.*

NJDOH PFL established a workgroup in the spring of 2021 comprised of other PFL jurisdictions



Stockton University students completing Station 2 of Project Firstline Escape Room

throughout the United States. The workgroup's goal was to create a space for jurisdictions to share resources, gain support, discuss how to utilize/adapt PFL content, and address programmatic challenges. From the workgroup, the PFL team partnered with three other PFL jurisdictions (New York, Utah, and Wyoming) to develop the PFL Escape Room as there was a need for an interactive learning activity. After submitting the final product, the co-creators from the four jurisdictions received final endorsement by the CDC to begin promoting and distributing the highly anticipated toolkit on August 25th, 2022.

The PFL Escape Room is evaluated using a summative evaluation. The evaluation measures self-efficacy, behavior change, and perceived knowledge gain. As of September 2026, live participation in the escape room in NJ resulting in the facilitation of 117 sessions and training 6,810 participants.



Rutgers University students completing Station 2 of Project Firstline Escape Room

Evaluation results from the post-evaluation feedback show 95% of participants experienced high to moderately high levels of satisfaction with the training event. In addition, 94% of participants intended to implement the knowledge/skills from the training, and 97% of participants stated they would recommend it to a friend/colleague.

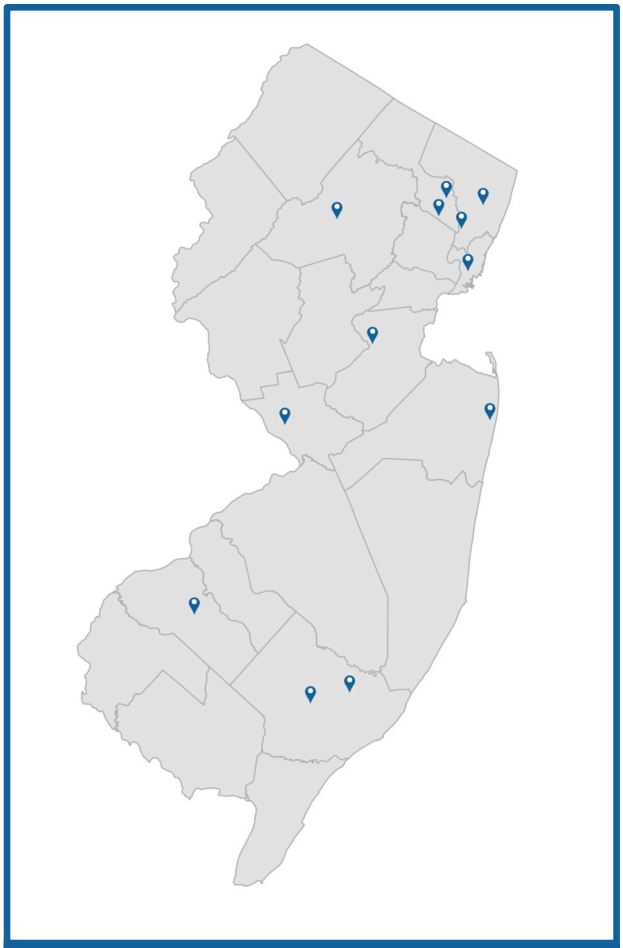
As a result, a collaboration between the PFL team and Stockton University began in March 2023 to publish the results of the PFL Escape Room in New Jersey. Through extensive research and work, the article, *"Engage, educate, escape: The New Jersey Department of Health Project Firstline Escape Room"* was published in the Health Education Journal in February 2024. The article is available here. Furthermore, a virtual escape room was developed and live on our learning management system in 2025 available here.

The PFL team plans to continue bringing the Escape Room on the road to healthcare facilities across the state, training a variety of healthcare workers including administrators, nurses, health educators, certified nursing assistants, and more. This activity is also intended to educate students in higher education who are majoring in healthcare, allied health, and public health programs. The manual is available for download here.

> *This forward-thinking approach to education not only enhances the competence of students but also plays a pivotal role in promoting public health and safety.*

Project Firstline: New Jersey College Tour

Empowering Future Healthcare Heroes



These institutes of higher education included:

- Atlantic Cape Community College
- County College of Morris
- Fairleigh Dickinson University
- Felician University, Monmouth University
- Montclair State University
- New Jersey City University
- Passaic County Community College
- Rowan University
- Rutgers School of Public Health
- Stockton University
- The College of New Jersey

In 2022, the PFL team launched the Project Firstline: New Jersey College Tour with the goal to provide and enhance infection prevention and control knowledge to students who are pursuing careers in public health, healthcare, and the allied health fields to prepare for their careers. In late 2021, the team recognized that there was a demographic that was missing from our infection control trainings and that was students.

In response to the critical need for comprehensive infection control training among healthcare, allied health, and public health students, an innovative initiative called the Project Firstline: New Jersey College Tour was developed to equip aspiring professionals with the necessary knowledge and skills to prevent infectious disease transmission. Evidently, students are the future of healthcare and with an industry that has had insurmountable challenges over the past few years, it was instrumental for us to provide valuable tools and knowledge to ultimately empower this key population before they start their careers.

There was a total of five cohorts in 2022 to 2025. Cohort 1 occurred in early 2022 and was entirely virtual on the GoToWebinar platform. Cohort 2 occurred in late 2022 and was entirely virtual on the Zoom platform. Cohort 3 occurred in late 2023 and was a hybrid training (Zoom platform and in-person). Cohort 4 occurred in early 2024 and was entirely in-person.

The PFL team was able to engage with 12 institutes of higher education, including 4-year colleges/universities and community colleges by partnering with academic leaders at each institution.

Our target audience were healthcare, allied

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health and public health students, and this included students who are studying to be nurses, physicians, physician assistants, physical/occupational/speech therapists, social workers and of course, public health professionals who might be transitioning to working in any healthcare setting. Additionally, the team targeted student associations that represented healthcare or public health students from each hosting institution to help the team with promotion to the student body on campus. These organizations had the opportunity to present and were highlighted at the College Tour session at their academic institution.

The PFL College Tour sessions were approximately one-hour sessions, which incorporated hands-on activities like demonstrations, discussion questions, and case scenarios to enhance practical application of infection control concepts, ensuring that students are well-prepared for the dynamic challenges they may encounter in healthcare settings.

By fostering a culture of awareness and responsibility, the series not only sought to empower students with the knowledge to safeguard themselves and their patients but also aims to contribute to the overall improvement of infection control standards within the healthcare setting. As a result of the five cohorts, 1,157 healthcare, allied health, and/or public health students were trained on infection control principles.

The PFL team anticipates expanding the initiative to community colleges to empower community college students who are pursing healthcare and allied health professions. The team also intends to incorporate subject matter expert interviews to showcase how infection control touches all healthcare and public health professions in the healthcare and public health settings. This forward-thinking approach to education not only enhances the competence of students but also plays a pivotal role in promoting public health and safety and the PFL team hopes to continue to expand this work for future healthcare and public health professionals. If you are interested in learning more and/or bringing the College Tour series to your academic institution, click here.

99% of respondents were highly satisfied with the presenters' presentation quality

95% of respondents indicated high relevancy of IPC-facilitated training to their career

100% of respondents indicated their overall understanding increased after IPC-facilitated training

99% of respondents would recommend a PFL training to others

35% of knowledge was gained from the pre-test to the post-test, cumulatively

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Project Firstline Health Service Grantees

The New Jersey Department of Health (NJDOH) Communicable Disease Service (CDS) received CDC funding from Project Firstline (PFL) in October 2021 to provide $800,000 for Infection Prevention and Control (IPC) training. NJDOH awarded this funding to four recipients—the Health Care Association of New Jersey (HCANJ), New Jersey Association of County & City Health Officials (NJACCHO), New Jersey Hospital Association (NJHA), and Rutgers Project ECHO (RPE)—to address IPC training needs through September 30, 2022. Each grantee focused on their area of expertise, utilizing varied training methods to reach healthcare professionals statewide.

Key

- Offering evidence-based basic and advanced IPC training in-person, remotely, and asynchronously.
- Promoting IPC tools to healthcare staff across New Jersey.
- Partnering with 15 local health departments for training delivery.
- Providing continuing education credits, including CHES, for healthcare professionals.
- Engaging in monthly meetings with the grant program management officer.
- Leveraging partnerships, including with Sepsis Alliance, to extend outreach.
- Conducting a learning needs assessment to inform trainings.
- Collaborating with PFL programs in other states.
- Offering advanced training topics, such as Train-the-Trainer programs.
- Evaluating knowledge gains through pre/post-tests and sustainability planning.
- Compiling a year-end report detailing training reach and outcomes

On October 1, 2022, NJDOH CDS received additional CDC funding to continue supporting communicable disease prevention.

A total of $1,014,576 from the Nursing Home & Long-Term Care Facility Strike (FSI) Team and Infrastructure Project was awarded competitively to the same four grantees as follows:

- **New Jersey Hospital Association:** $374,940
- **Rutgers Project ECHO:** $229,814
- **Health Care Association of New Jersey:** $209,822
- **New Jersey Association of City and County Health Officials:** $200,000

Throughout this period, the grantees delivered 133 online and in-person trainings, reaching nearly 5,900 healthcare professionals across over 6,000 settings. They further disseminated IPC content through social media (Facebook, Instagram, X/Twitter, LinkedIn) and email, reaching over 20,141 social media users and 219,610 individuals via email.

This second funding cycle focused on IPC training for skilled nursing and long-term care (LTC) facilities. Grantees developed tailored training approaches for healthcare staff in skilled nursing (SNF) and LTC facilities, fulfilling NJDOH requirements to deliver 7-8 IPC trainings per quarter, conduct at least one Train-the-Trainer session per quarter, and ensure trained staff conducted at least five trainings by the grant's end. These programs emphasized best practices in IPC and targeted health disparities in these facilities.

Additionally, grantees partnered with local health departments and stakeholders to broaden training reach. Like the activities referenced when working under the Project Firstline health service grants, the grantees measured program effectiveness through pre/post-testing, annual impact reports, and sustainability planning. In addition, grantees were required to participate in monthly NJDOH meetings, submit quarterly reports, organize quarterly site visits with their designated NJDOH Program Management Officer, and submit biannual performance reports to the CDC were required to ensure accountability.

The Strike Team grant funding concluded in May 2024, exactly one year after the national public health emergency officially ended, in accordance with the grant's original terms. This marked the end of NJDOH's management of the health service grants with the four grantees, initially awarded in 2021.

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Addressing Disparities in Health Education Delivery

Since the beginning of the PFL initiative, the NJDOH team has set health equity as a priority in the development and execution of Project Firstline IPC trainings for frontline healthcare workers and students. Recognizing the significant impact of disparities in the healthcare system, the PFL team strived to design trainings that align on a health equity framework to not only educate the healthcare workforce but empower them with the confidence to apply infection control practices by providing education that increases accessibility and accommodates diverse learning styles and language preferences.

For educational programming, the PFL team has taken the liberty to translate many IPC educational materials (PowerPoints, handouts, factsheets, etc.) that were developed in the top four requested languages identified in our learning needs assessment that was distributed to frontline healthcare workers in 2021 and 2022. The materials were translated in Spanish, Haitian Creole, Tagalog, and French and acquired in 2022 to provide to training participants digitally and in print.

While the team delivered trainings in English, participants were able to follow along with the lesson in their preferred language via a tablet that the team would provide. Additionally, the pre and post-tests were translated in the languages listed above as well. Location is an aspect of health equity that intersects with social determinants of health like ethnicity/race, socioeconomic status, and healthcare access. It is crucial to understand and highlight any gaps based on the geographic location at previous trainings that served people who work in settings that put them at increased/higher risk of becoming infected or exposed to hazards.

Based on accumulated training data, the majority of those who attended a training were located Central region of the state. With this knowledge, the PFL team hopes to conduct more outreach efforts in the Southern region of the state to provide equitable infection control education, while also focusing on the interplay of healthcare-associated infections and health inequity.

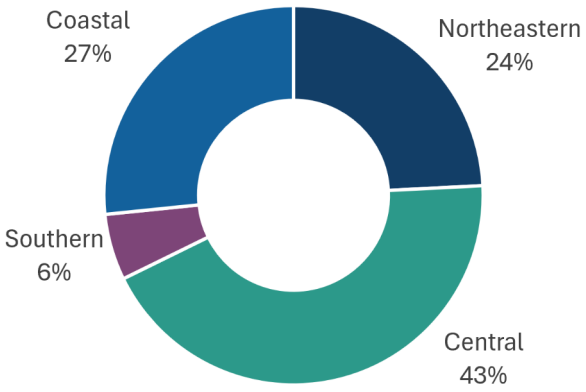


Figure 3. Region of participants in a PFL-led IPC training (2021-2022)

The team strives to continue providing IPC training to various audiences to equip them with the practical tools to address systematic barriers in the healthcare realm. In response, the team has continued to develop and incorporate education on cultural competency, implicit bias awareness, and communication skills tailored to diverse populations to help mitigate disparities in healthcare delivery. Ultimately, the PFL team strives to continuously work towards the goal of ensuring all patients receive compassionate and equitable care.

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Virtual Quarterly Training Success

Lessons from the Continuing Education Pilot Program

After the successful conclusion of the Continuing Education (CE) Pilot Program, the PFL team took time to reflect on the outcomes and gather key insights. The evaluation of the pilot revealed two major factors contributing to its success: the convenience of virtual training sessions and the incentive of continuing education credits.

These factors played a pivotal role in driving participation, and based on the positive feedback, the team swiftly moved forward to expand the initiative.

In response to the program's initial success, the PFL team launched two virtual cohorts, each consisting of three training sessions. Participants registered in bulk for all sessions within their chosen cohort.

Across both cohorts, a total of 651 registrants signed up for the trainings, with 260 attendees participating in the live sessions.

Cohort 1 was delivered on May 25th, 2022, June 29th, 2022, and July 20th, 2022.

Cohort 2 followed with live sessions on August 15th, 2022, September 19th, 2022, and October 3rd, 2022.

Following the conclusion of these virtual cohorts, the PFL team reconvened to evaluate the program and analyze participant feedback. One of the most

Feedback Shapes Future

frequent requests from attendees was for more advanced training topics. Taking this feedback into account, the PFL team made significant changes for the 2023 program, including updates to content and delivery.

In 2023, the training sessions were revamped to cover four new advanced topics. The format shifted to quarterly Zoom sessions, with participants required to register for each training individually. This allowed for more flexibility and customization in attendance. An on-demand option was also introduced, but it was discontinued after low participation rates. The four quarterly sessions took place on the following dates: May 22nd, 2023, July 19th, 2023, September 20th, 2023, and December 6th, 2023. The 2023 trainings attracted 525 registrants and saw 303 attendees by the end of the year, showing an increase in engagement compared to the previous cohort model.

A comparative analysis of the attendance rates between the two years highlighted the effectiveness of the quarterly training model. In 2023, the attendance rate was 57.7% across the four sessions, compared to 39.9% for the six sessions held in 2022. This improvement demonstrates that

Attendance Trends and Program

quarterly offerings may better align with participants' availability and interests.

Building on the success of the 2023 program, the PFL team plans to continue refining its virtual training offerings. Ongoing process evaluations and participant feedback will inform future sessions, ensuring the content remains relevant and adaptable to the evolving needs of frontline staff. As the PFL team moves forward, the focus remains on delivering high-quality training that supports professional

Looking Forward

development and enhances the skills of participants across the field. Through its commitment to continuous improvement, the PFL team is poised to expand its reach and impact in the coming years.

Improving Infection Prevention Education through Advanced Topics

Optimizing Standards of Care

From 2021 to 2023, the PFL team disseminated and collected data from healthcare workers across New Jersey through our LNA and facility-specific intake forms to help inform future IPC-based trainings and materials. Through these data collection methods, the team was able to visualize and conceptualize highly requested IPC topics such as COVID-19, Personal Protective Equipment (PPE), Hand Hygiene, Optimized Standards of Care, Standard and Transmission-Based Precautions, Environmental Cleaning and Disinfection, Risk Recognition in Healthcare, Enhanced Barrier Precautions, Recognizing Risk Using Reservoirs, Injection Safety, and an option to include open-ended answers. Furthermore, the PFL team used the available data sources to identify the most effective method for delivering infection prevention and control information to healthcare workers.

Based on the 2021 to 2023 LNAs, the results revealed that 49% of respondents sought additional information on the topic of "Optimizing Standards of Care." Additionally, 45% of respondents preferred an online platform, while 34% favored in-person sessions. The PFL team also considered the time constraints, which posed a challenge, as 32% of healthcare workers requested a 60-minute session, whereas more than half preferred a shorter 30-minute session based on the facility-specific intake form.

> *The PFL team used the available data sources to identify the most effective method for delivering infection prevention and control information to healthcare workers.*

With more than 75% of the respondents expressing a desire for CEUs, the team concluded that a 60-minute virtual session would be the most effective way to conduct this program. Ultimately, the team would provide a recorded self-paced version on SBX, PFL's online learning platform to enhance accessibility.

The PFL team began developing the Optimizing Standards of Care training on December 21st, 2022, coinciding with the hiring of their Infection Control Specialist. With the Infection Control Specialist's assistance, the PFL team successfully finalized all edits on the presentation, which received CDC approval shortly thereafter, on January 21st, 2023.

The concluding presentation featured resources from the CDC, the Association for Professionals in Infection Control and Epidemiology (APIC), and various scientific research articles. Its primary objective was to equip healthcare workers with practical and effective model of care standards to assist them in their daily practice.

Following the live webinar, the PFL team was enthusiastic about broadening the scope of complex topics for healthcare professionals in 2024, with a particular emphasis on Infection Preventionists (IPs).

The goal for 2024 was to create an educational program aimed at providing resources and support regarding healthcare-associated infections (HAIs), outbreaks, and the increasing prevalence of multi-drug resistant organisms (MDROs) within the IP community. To reach that goal, the PFL team came up with the IP Exchange, an emailed based model.

Train-the-Trainer Pilot Program: Increasing Engagement and Education

In the first year of conducting our Learning Needs Assessment (LNA), we asked healthcare workers about barriers preventing the consistent use of best practices in infection prevention and control (IPC) at their respective workplaces across New Jersey. Respondents identified a 26% barrier rate, with specific challenges including inconsistent IPC training (7%), the need for more reminders (10%), and a greater need for IPC training (9%). Additionally, 84% of respondents indicated that printed or digital materials would be the most useful form of post-training support for IPC.

In subsequent years, the number of respondents who expressed a need for more IPC training increased as seen in the uptick of facilities requesting PFL training via our intake form. In response to these findings and building upon our successful partnership with Hackensack Meridian Health (HMH) Network, the team developed a Train-the-Trainer (TtT) pilot program. This program aimed to engage health systems and equip healthcare staff with educational tools and materials to conduct regular IPC training sessions.

In March 2023, PFL invited healthcare facilities to participate in this pilot through an interest form. The pilot included a two-day training event offering CE credits and the distribution of support boxes containing educational materials and supplies. Of the five facilities that expressed interest, three participated.

The program's deliverables for participating facilities included attendance at both training sessions, leading or co-leading a minimum of three IPC training sessions between May 18th and July 31st, and tracking attendance, promoting pre- and post-training evaluations, and reporting key metrics and feedback to the PFL team.

Participants received 6 CEs for completing the two-day training, which covered CDC's Health Equity Guiding Principles for Inclusive Communication, adult learning principles, and IPC topics such as "Hand Hygiene." Additionally, participants gained access to PFL PowerPoint presentations, toolkits, IPC resources, educational posters, handouts, and ongoing support from the NJDOH PFL team.

The TtT pilot program completed in the Fall 2023, we evaluated the results and feedback from the participating facilities. While the training materials and resources proved beneficial, the reporting and tracking requirements were challenging. To address these barriers and continue supporting healthcare facilities, we revised our approach for 2024 to include uploading all PFL TtT materials and resources to the GoToTraining platform for easy access and downloading, condensing the training into a 1-hour session, and increasing accessibility by on-demand access through our learning management system (LMS).

Lessons Learned & Improvements for 2024

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Expanding Horizons: The IP Exchange

In 2024, a key focus area for our Infection Control Specialist was to engage with numerous Infection Preventionists (IPs) across New Jersey. The objective was to develop an infrastructure for infection prevention and control (IPC) education that promotes the "exchange" of information, training, and resources to IPs. This initiative resulted in the launch of the IP Exchange which serves as a quarterly email-based platform tailored to deliver educational resources, relevant infection control updates, and training information to Infection Preventionists throughout the year.

Each quarter, the IP Exchange will regularly include a three-column section featuring information on the following topics: PFL's weekly IPC tips, a "Bug of the Month," and Hygiene 101. Additionally, there is a segment dedicated to showcasing a tool designed to enhance the effectiveness of infection control programs in healthcare settings or to promote an upcoming training session. Throughout the email, there are various infection control questions and interactive polls to engage the IPs and gather their insights from the field. To conclude every IP Exchange, an inspiring quote will be included to uplift Infection Preventionists on their journey.



An example of the IP Exchange three-column section featuring resources for Infection Preventionists.

When preparing to implement the IP Exchange, the team opted for a gradual approach, starting with a soft launch to incrementally increase the number of IPs reached. In the Winter of 2024, the first IP exchange email was sent to 93 IPs specifically within Long-Term Care (LTC) Facilities. The initial email was opened by 64% of the recipients, and among those who opened it, 35% engaged with and clicked on the content shared.

In Spring 2024, an IP exchange email was distributed to 422 IPs, again specifically targeting LTC. A total of, 73% of the recipients opened the email, while 30% engaged with and clicked on the shared content. For this quarterly issue, the featured bug was Measles, which gained significant attention due to an increase in cases across the United States.

In Fall 2024, an IP exchange email was sent out to 1,150 IPs, aimed at all healthcare facilities. Of those recipients, 49% opened the email, and 11% interacted with the shared content by clicking on it. For that quarterly issue, the "Knowledge is Power - Fireside Chat" series was highlighted, attracting 71 participants who registered for the *"Enhanced Barrier Precautions and Contact Precautions in Long-Term Care Facilities Webinar."*

Ultimately, the PFL team deemed the IP Exchange as a successful new method in reaching an audience that has a pivotal role in the implementation and action of infection prevention and control in the workplace. Furthermore, the increased interaction and connectivity between the PFL team and its newfound links fostered and drove the creation of innovative approaches to IPC-based learning.

Enhancing and Empowering: Knowledge is Power Virtual Series

The Knowledge is Power (K-IP) Virtual Series was created with an aim to provide enhanced training to Infection Preventionists (IPs) in all healthcare facilities. To utilize the success of the IP Exchange, this initiative was informed by collecting data about interest in more advanced IPC topics that IPs may want education on.

According to the Spring IP Exchange email blast with a reach of 422 respondents, 67% expressed interest in a fireside chat compared to 83% desired advanced training on Transmission-Based Precautions and multi-drug resistant organisms (MDROs). The PFL team began the K-IP Virtual series in 2024 which consisted of two 60-minute webinars and offered both Nursing and Public Health (HO and REHS) CEU credits. Session 1 focused on Enhanced Barrier Precautions and Contact Precautions in Long-Term Care facilities and Session 2 focused on Droplet Precautions and Airborne Precautions.

Our first K-IP webinar launched on October 23rd, 2024, titled: Knowledge is Power: Enhanced Barrier Precautions and Contact Precautions in Long-Term Care. The aim was to provide infection preventionists (IPs) with essential tools to accurately identify transmission-based precautions for managing infections and outbreaks in healthcare settings. The webinar attracted 71 registered participants, resulting in a 60% attendance rate.

We were pleased to welcome guest speaker Katelyn White, an Epidemiologist from the Infection Control Assessment & Response (ICAR) Unit, who addressed personal inquiries about her field experience and frequently asked questions. Overall, the training was extremely well received, resulting in a 19.8% increase in knowledge among participants, who provided excellent feedback:

"I found the information regarding the use of AIIR rooms and airborne precautions very informative."

"The most enjoyable was seeing everyone's answers to questions and trying to understand their thought process."

"I really enjoyed the videos. The speaker spoke slow and make the material very understandable."

"Thank you for doing these educations its very helpful!"

The second K-IP webinar took place on March 26, 2025, under the title: Knowledge is Power: Droplet and Airborne Precautions. This session was specifically designed for infection preventionists working in environments equipped with airborne infection isolation rooms. As the second part of a two-part series, the primary objective was to equip IPs with crucial tools for accurately identifying transmission-based precautions to manage infections and outbreaks in healthcare settings. The webinar attracted 185 registered participants, achieving a 66% attendance rate.

"Nicely done training, one of the better I've seen in a long time. Thank you."

"Please have more sessions like this."

"The presenter! She was informative and had a positive approach to the subject matter."

To enhance understanding of the topics, we presented three different videos during the session. We were delighted to have guest speaker Thomas Abbott, a nursing consultant from the Infection Control Assessment & Response (ICAR) Unit, who addressed common questions regarding airborne infection isolation rooms (AIIR). Overall, the training was exceptionally well received, leading to an 18.3% increase in knowledge among participants, who shared excellent feedback:

> *To utilize the success of the IP Exchange, this initiative was informed by collecting data about interest in more advanced IPC topics that IPs may want education on.*

Cultivating and Instilling Safe Injection Safety Practices

The New Jersey Department of Health's Communicable Disease Service (NJDOH CDS) has been a long-standing partner of the Centers for Disease Control and Prevention's (CDC) One and Only Campaign for injection safety, supported through the Epidemiology and Laboratory Capacity (ELC) program.

Building on this foundation, the department developed a successful biannual, one-day train-the-trainer (TtT) program for healthcare facility staff and NJDOH surveyors.

With funding from the Strengthening HAI/AR Program (SHARP 1 and 2) supplements, the NJDOH Project Firstline (PFL) team, Infection Control Assessment & Response (ICAR) team, and the Healthcare-Associated Infections and Antimicrobial Resistance (HAI/AR) Unit have revitalized and enhanced the program.

This updated training now provides healthcare workers with practical skills and knowledge to advance injection safety and infection control in their settings.

The first session of the revitalized program was held on Tuesday, March 12, 2024, during Patient Safety Awareness Week at the Middlesex County Fire Academy. The event featured a half-day of lectures and a hands-on "boot camp." Keynote speaker Dr. Joseph Perz, Deputy Branch Chief of Public Health Programs at the CDC's Division of Healthcare Quality Promotion, presented *The Past, Present, and Future of Injection Safety.*

Following the keynote, attendees participated in focused presentations, including:

1. Project Firstline: Injection Safety Refresher
Facilitator: Jasmine Davis, MPH, MCHES®

2. ICAR: Auditing vs. Competency and Effective Feedback Methods
Facilitator: Hannah Tipa, BS and Alicia Cromwell, BSN, RN, CNOR

3. HAI/AR: The Impact of Unsafe

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Interactive "Bootcamp" Training

The second half of the day featured eight interactive stations, each addressing a specific aspect of injection safety. Attendees rotated through stations in 12-minute sessions, gaining hands-on experience. The stations included:

1. Know Your Needle
Facilitator: Shabri Benson, BSN, RN
Participants learned to differentiate needle sizes and gained confidence in administering injections.

2. Hand Hygiene
Facilitator: Valerie Reger, LPN
A fun, interactive approach to auditing hand hygiene through a "caught-red-handed" activity.

3. Personal Protective Equipment
Facilitator: Alicia Cromwell, BSN, RN, CNOR
Attendees practiced proper donning and doffing of PPE for activities like point-of-care testing.

4. Glucometer Tips
Facilitators: Rita Carr-Robinson, A.A.S., RN and Ashley Ammerman, LPN
Focused on cleaning and disinfecting glucometers, with opportunities for hands-on practice.

5. Bloodborne Pathogen Trivia
Facilitator: Sharon Daniels, MSN, RN
A lively "March Madness"-style trivia game on standard precautions.

6. Jeopardy
Facilitator: Kelly McLaughlin, MPH, MCHES®
A team-based quiz reinforcing safe injection practices.

7. Case Scenarios
Facilitator: Miriam Gonzales, CHES®
Real-world applications of safe injection practices.

8. Project Firstline Escape Room
Facilitator: Sheila Dunn, MBA
A superhero-themed infection prevention activity featuring cleaning and disinfection tasks.

Program Impact

Promotional efforts—including social media, email campaigns, and NJLINCS health alerts—resulted in 118 registrations, with 28 individuals waitlisted due to capacity constraints. Despite 24 cancellations, 81 healthcare professionals attended the event. The total number of participants who attended the training and completed the pre and post-test was 72.

Attendees received certificates of completion, training tools for facility implementation, and the opportunity to earn continuing education credits. This annual training will continue as part of grant deliverables through July 31, 2027.

Ultimately, those who completed a course demonstrated:

99% of respondents were highly satisfied with the presenters' presentation quality.

97% of respondents indicated their overall understanding increased after IPC-facilitated training.

97% of respondents indicated their overall understanding of injection safety improved.

97% of respondents indicated they would recommend this training to others

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Broadening Infection Prevention and Control Education Delivery Modalities

Leveraging Learning Management Systems

The Project Firstline (PFL) team initial learning needs assessment (LNA), conducted in 2021, highlighted a significant demand for asynchronous, self-paced training among New Jersey's healthcare workforce, with 25% of respondents requesting this format. The need for flexible training options was further underscored by ongoing staffing shortages and high turnover rates in healthcare facilities, challenges that were amplified by the COVID-19 pandemic. Notably, 17% of respondents cited staffing issues as an obstacle to receiving essential infection prevention and control (IPC) training.

To address this need, PFL team allocated grant funding from the Strengthening HAI/AR Program Capacity (SHARP) grant to invest in a learning management system (LMS) that could support self-paced education. While the New Jersey Department of Health (NJDOH) currently used the New Jersey Learning Management Network (NJLMN), this system lacked certain functionalities required by the CDC for performance reporting. As a result, the team selected the SBX LMS (formerly known as Saba), which is approved for use by the State of New Jersey, is currently used by the Civil Service Commission and select NJDOH programs thus meets our reporting requirements.

This initiative began in September 2022 and involved an 18-month process to secure the necessary approvals, procure the LMS, and train staff on its use. PFL staff partnered with Educe, a talent management consulting firm contracted by the state, to implement and customize SBX for our purposes. Our instance of the LMS launched in March 2024, enabling us to promote and deliver our training offerings.

Currently, we provide training in the following areas, with additional courses added as they become available: *Infection Control Essentials, Injection Safety Refresher, Reducing Multi-Drug Resistant Organisms, Cleaning and Disinfection, What is a Virus and Viral Transmission?, Optimized Standards of Care, Donning and Doffing Personal Protective Equipment (PPE), Steps of Doffing Gloves,* and the *Project Firstline: Train-the-Trainer Course*. Although continuing education credits are not offered, healthcare workers receive a certificate of completion for each course.

As of 2025, 632 courses have been completed by various healthcare workers and professionals through our self-paced LMS platform. The highest completed training with 18% is Infection Control Essentials, a quick self-paced course intended to provide basic but key information on infection control practices. Comparatively, the lowest completed training with 1% is the *Droplet Precautions & Airborne Precautions*, a self-paced course intended to provide training materials and information to equip trainers to teach others. Ultimately, those who completed a course demonstrated:

77% of respondents were highly satisfied with the presenters' presentation quality

78% of respondents indicated high relevancy of IPC- facilitated training to their career.

72% of respondents indicated their overall understanding increased after IPC-facilitated training.

92% of respondents indicated a high to moderately high level of satisfaction with their learning experience.

96% of respondents intend to implement the training received.

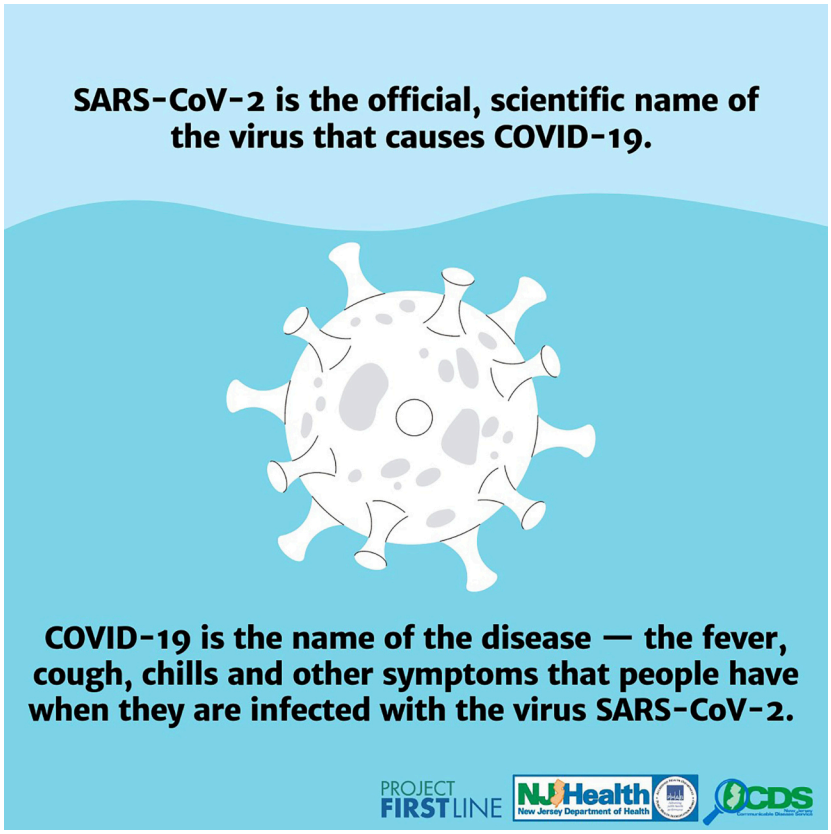
Catalyzing Awareness

The Evolution and Triumph of Project Firstline's Social Media Engagement

The PFL team launched its inaugural post in May 2021. Despite initially having a limited pool of social media content to choose from, the team proactively curated and crafted twenty engaging social media posts.

These posts were strategically designed to amplify awareness on crucial topics such as personal protective equipment (PPE), virus spread, cleaning and disinfecting, handwashing, the PFL learning needs assessment (LNA), and collaborative partnerships for the initiative.

By the close of 2025, the social media categories expanded significantly, encompassing promotional videos, the PFL College Tour, Virtual Series, the PFL toolkit, an Escape room, and the introduction of IPC Tips of the Week. This diversified content was disseminated across a spectrum of social media platforms, including Instagram, Instagram story, Facebook, and X/Twitter, LinkedIn, and the most recent addition, Threads. To achieve their training success, the PFL team strategically employed a combination of email blasts, social media toolkits, and visually compelling flyers, ensuring a broad and impactful reach.



The social media post with the highest number of people reached online.

> *Social media's ability to reach a diverse audience, enable discussion, provide social support, and build communities makes it the perfect vehicle for health promotion.*

Overall, since 2025 the PFL team developed 1,993 posts that reached over 1,957,026 people across all social media platforms. The most promoted post was PFL IPC Tip of the Week which provides condensed information tailored to a weekly or monthly IPC theme across all social media platforms. Posts posted on Facebook related to IPC topics (e.g., Virus spread, personal protective equipment, devices) garnered the most engagement, indicating areas for improvement in user engagement strategies.

To understand social media's multifaceted nature and relationship to health behavior change, the PFL team examined various studies and empirical evidence to determine if a positive association between social media use and health behavior change was evident. Social media's ability to reach a diverse audience, enable discussion, provide social support, and build communities makes it the perfect vehicle for health promotion. The intersection between social media and health behavior modification is complex, and the possible risks should be acknowledged.

The current literature offers recommendations to enhance the PFL team's social media engagement. These include:


Collaborating with health influencers


Actively engaging with users


Fostering discussions


Leveraging partnerships to amplify health messages

Direct engagement with users is crucial for expanding the reach and effectiveness of interventions. Additionally, employing social media analytics tools can help identify communication gaps and guide the development of comprehensive communication plans.

The PFL team is building on these insights to understand the structure of their social media data, identify patterns, detect anomalies and formulate hypotheses for further analysis. used the available data sources to identify the most effective method for delivering infection prevention and control information to healthcare workers. Of recipients, 49% opened the email, and 11% interacted with the shared content by clicking on it. For that quarterly issue, the “Knowledge is Power - Fireside Chat” series was highlighted, attracting 71 participants who registered for the “Enhanced Barrier Precautions and Contact Precautions in Long-Term Care Facilities Webinar.”

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Upcoming PFL Projects

In 2026 and beyond, New Jersey Department of Health's Project Firstline will continue to prioritize collaborating and working with communities that serve under-served populations by:

- Improving IPC-based trainings to reach a more diverse population of healthcare personnel and healthcare settings.
- Expanding current IPC training topics and methods.
- Securing Continuing Education credits for various disciplines.
- Developing unique modes and methods to novel IPC-based trainings.

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