**Implementing Express STI Services:
Considerations and Lessons Learned**

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NACCHO
National Association of County & City Health Officials

Background

Through the STI Express Initiative, NACCHO, in collaboration with the Centers for Disease Control and Prevention's (CDC) Division of STD Prevention, has collected resources to support the establishment, scale-up, and evaluation of STI express services, which refer to triage-based STI testing without a full clinical examination. The purpose of this toolkit is to support clinics that are considering, implementing, or scaling up STI express services by summarizing available evidence, promising practices, and diverse implementation models. This toolkit is divided into nine sections and contains overviews of evidence, key considerations, case studies, and resources from STI clinics that provide this type of service. For any questions or requests to submit materials, please contact us at hsvh@naccho.org.

The majority of data and tools collected for this resource were completed prior to the COVID-19 pandemic. We recognize that this toolkit is being released during unprecedented times and that the pandemic has resulted in significant changes in STI testing and service provision. Therefore, assumptions regarding typical clinic settings and services might not apply at this time.

For additional information on STI express services, check out our recent multi-site evaluation, the first of its kind assessing outcomes related to STI express services in the US, our issue brief, and our STI express billing fact sheet.

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About NACCHO's STI Express Initiative

This report is the culmination of a three-year NACCHO-led initiative funded by and in collaboration with the Centers for Disease Control and Prevention's (CDC) Division of STD Prevention (DSTDP). The initiative was designed to develop a better understanding of the role of express services for STI prevention and treatment and increase clinic capacity to implement express services that are responsive to patient, clinic, and community needs. The content reflects what has been learned through the initiative's activities, which include two Communities of Practice with over 50 STI clinics across the country, in-depth projects with three STD clinics to support specific components of express visit implementation and evaluation, and a multi-site evaluation with thirteen clinics in seven cities and counties.

For more information about our sources, please see the appendix.

Glossary of Acronyms

| Acronym	Full Term
CASI	Computer-assisted self-interview
CDC / DSTDP	Centers for Disease Control and Prevention / Division of STD Prevention
CoP	Community of Practice
CPT	Current procedural terminology
DIS	Disease intervention specialist
E+M	Evaluation and management
EMR	Electronic medical records
HAV	Hepatitis A virus
HBV	Hepatitis B virus
HCV	Hepatitis C virus
HIPAA	Health Information Portability and Accountability Act
HIV	Human immunodeficiency virus
HPV	Human papillomavirus
ICD	International Classification of Disease
LPN	Licensed practical nurse
M&E	Monitoring and evaluation
MA	Medical assistant
MSM	Men who have sex with men
NP	Nurse practitioner
PA	Physician assistant
POC	Point of care
PrEP	Pre-exposure prophylaxis
RN	Registered nurse
STD	Sexually transmitted disease
STI	Sexually transmitted infection

Overview of STI Express Services

What is Express?

STI express services have been implemented both domestically and globally to provide less resource-intensive services to patients at lower risk for STIs and without other acute health care needs. In express services, also known as fast-tracking, asymptomatic patients are routed to less intensive clinical services. STI express services have been shown to increase clinic capacity,[1,2] reduce time to treatment,[3] reduce visit time,[4] and decrease visit cost,[5] and therefore have the potential to increase access to testing while maximizing available resources.
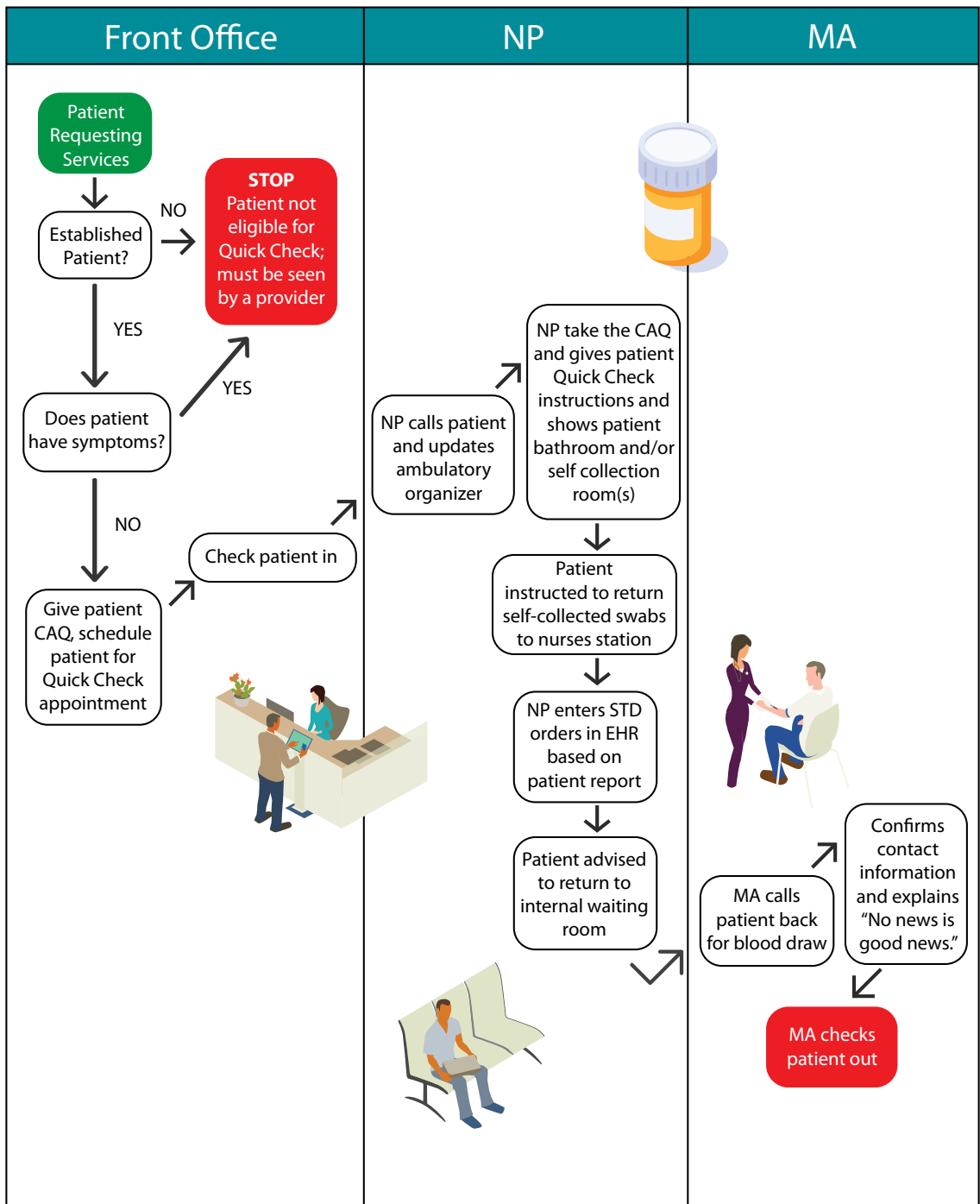
> Through this project, we have come to define express services as triage-based STI testing without a full clinical examination. Because express services are driven by limited interactions with clinicians, they are also associated with staffing models that maximize top of license strategies, patient self-collection of swabs, and technology and automation to conserve time and staffing.

In considering whether or how to implement express services, it is important to remember that there is no one-size-fits-all approach to express. While express services are commonly associated with stand-alone clinics—such as Dean Street Express in London—in the U.S., they are overwhelmingly integrated into existing clinics as distinct patient flows. Because they are offered as integrated services, they are defined by each clinic's structure, flow, staffing, and resources. For example, triage might be accomplished via kiosks or face-to-face interviews with medical assistants (MAs). Clinics might be staffed with a number of physicians and nurse practitioners (NPs), or they might be nurse-driven and heavily reliant on health educators. Some clinics have invested in point-of-care (POC) testing that enables test results in 90 minutes, while others rely on public health labs for processing. Sophisticated clinics are not necessarily more express; rather, they are more resourced.
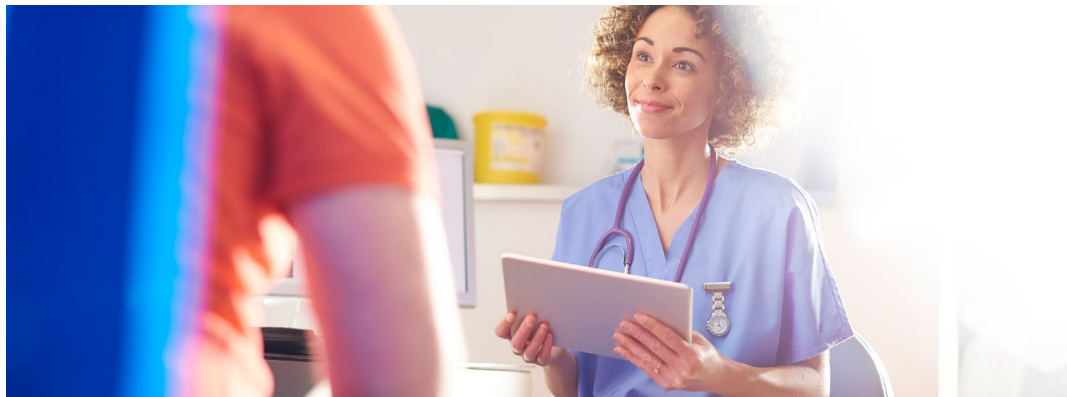
Due to resource constraints, most clinics interested in establishing express services are not going to be able to implement their full wish lists. Express services should be thought of as a strategy that can be deployed to address a specific set of needs within the confines of a particular healthcare setting. Below are three examples of what express services look like as integrated services within STI clinics in the U.S. More details regarding components of these models are provided throughout the rest of the toolkit.

Model A. This model utilizes a triage nurse to route patients to express or non-express services. Fast track services are one of several less-intensive visit types, along with treatment-only visits and pregnancy testing.

Patient arrives and checks in at registration desk

A nurse triages patient to **full testing** or **fast track** visit

Fast Track Visit Criteria:
- Asymptomatic Clients
- Asympt. Contacts
- Treatment Only
- Immigration Testing
- Pregnancy Test Only

Full Testing Visit Criteria:
- Symptomatic
- Clients
- High Risk (Exposure Based)
- Opt-In

Fast Track PHN provides services: history, blood, urine, rapid HIV, HIV results, education, treatment (if applicable)

Full Visit PHN provides services: history, physical exam, blood, swab, urine, rapid HIV, education, HIV results, presumptive treatment

Fast track patient self-collects swabs for gonorrhea and chlamydia testing

Patient receives results from stat lab the same day of visit, and calls back after five days for urine/blood results

Patient calls to receive results five days after visit for urine, blood, and swab specimens

Model B. In this model, patients are triaged at registration. Note that here, new patients are not eligible for express services. Patients are also not provided counseling or any test results at their visit.

Front Office	NP	MA

Front Office

Patient Requesting Services

↓

Established Patient? —NO→ **STOP** Patient not eligible for Quick Check; must be seen by a provider

↓ YES

Does patient have symptoms? —YES→ (to STOP)

↓ NO

Give patient CAQ, schedule patient for Quick Check appointment → Check patient in →

NP

NP calls patient and updates ambulatory organizer →

NP take the CAQ and gives patient Quick Check instructions and shows patient bathroom and/or self collection room(s)

↓

Patient instructed to return self-collected swabs to nurses station

↓

NP enters STD orders in EHR based on patient report

↓

Patient advised to return to internal waiting room

MA

MA calls patient back for blood draw →

Confirms contact information and explains "No news is good news."

↓

MA checks patient out

Model C. This model utilizes kiosks to conduct triage through a computer-assisted self-interview (CASI) risk assessment. Algorithms route patients to three tracks: screening only, screening plus, and clinician visits. Screening plus visits allow for situational triaging by the nursing team. Patients who might need contraception, linkage to HIV care, Pap smear, HPV vaccine, or who would benefit from PrEP can see clinicians based on availability, but at a minimum will receive STI testing. The clinic flow for screening only visits is below.

Patient arrives, checks in, and completes kiosk

1

Computer algorithm triages patient to visit type

2

Print-out created and reviewed by nursing team

3

Screening only or screening-plus patients called back by MA

4

MA verifies patient responses and confirms screening only eligibility

5

MA draws blood for HIV and syphilis testing

6

Patient self-collects Aptima specimens for gonorrhea and chlamydia testing

7

Patient receives results through patient portal, test results lines, or call from RN

8

Each of these clinics offers express services in addition to clinician visits, yet they look different based on the clinics' resources, staffing pool, patient population, and other health services provided. Throughout the rest of the guide, we will present additional models and components of express services to illustrate how varied they are. Think about how they might fit in your setting as you read.

Implementing STI Express Services

Where to Start

Many roads can be taken to enhance clinical services through express visits. If you are thinking about implementing express services for the first time, we recommend the following steps:

- Consider your motivations for express services (such as increasing patient satisfaction, increasing STI testing among a specific population, or gaining clinic efficiencies);
- Identify primary barriers to efficiency (such as clinic bottlenecks, staffing inefficiencies, or test turnaround times); and
- Prioritize investments and protocol changes that best address identified challenges.

Unless unlimited resources are available, a clinic's chosen express model is a compromise that aims to address the most pressing barriers. For example, if a clinic turns away a high number of patients every day, they might want to focus on reducing patient wait time and visit time to accommodate more patients in the clinic. However, if they only have one bathroom available for patients to self-collect swabs, they might need to continue relying on providers to collect samples. Another clinic might want to prioritize patients that are unlikely to return for treatment, so investing in a point-of-care (POC) testing machine that greatly reduces turnaround times might be most important to them. A third clinic might have a limited staffing pool, so they choose to invest in technology that automates triage and results notification.

Among clinics participating in NACCHO's STI Express Initiative, the most common motivations for implementing express services were reducing clinic clog, reducing time to treatment, reducing unmet need (for example, reducing "turnaways," or patients who request services but cannot be seen due to capacity or timing issues; as well as providing options for populations with diverse needs),and gaining staffing efficiencies. Utilizing data and key informant interviews with clinic staff and patients, consider what your greatest needs are; how to fulfill those needs will depend on your clinic infrastructure and resources and whether they facilitate or impede desired changes.

Below are a number of factors identified through NACCHO's STI Express Initiative as common barriers or facilitators. Most of these factors will not prohibit express implementation but will impact potential patient volume and how quickly patients receive results. Consider which affect your clinic, and add others not listed here. Additionally, consider which of these factors are out of your control/difficult to change (e.g., you have to work with your current electronic medical records (EMR) system), and which you might be able to change, such as by purchasing or renting a POC test machine or advocating for state-sponsored billing innovations.

Barriers and Facilitators

Lab and Testing

- Location (i.e., on-site vs. offsite)
- Capacity and turnaround time (if you rely on public health labs, improving their turnaround time might be more difficult)
- Availability of POC testing

EMR

- Flexibility to add components, such as intake or follow-up forms, flags for providers, and the designation of express services for evaluation and quality improvement purposes
- Interface between lab and clinic reporting systems
- Technology to notify patients of results electronically

Staffing

- Adequate pool of nurses, MAs, health educators, and others with similar job descriptions to support express services
- Standing orders that allow for an expanded scope of practice for nurses, MAs, and health educators
- Flexible licensing and delegation requirements from state boards and institutions

Billing

- Capacity and expertise
- High insurance coverage among patients
- State-level billing innovations that support nurse-driven visits
- 340B programs

Physical Space

- Location and number of single-occupancy bathrooms
- Privacy for triage
- Waiting room size

Once you have a list of barriers and facilitators in your clinic, revisit your motivations and consider what feels "doable." If you want to reduce turnaround time of test results and reduce turnaways, but you rely on a public health lab that has a seven-day turnaround time and cannot report lab results electronically, you might want to focus on reducing turnaways—your increased control over influencing factors is more likely to lead to improvement. Note that while express services have resulted in benefits to both clinics and patients, they are not a panacea. It is important to have realistic expectations of what express services can accomplish and how they might complement other clinical improvements.

The rest of this section will explore in detail various aspects of express services. They are arranged roughly in order of patient flow.

Billing

Summary of Evidence

Billing remains a challenge for many STI clinics, and billing for STI express services is no exception. Difficulty with reimbursements may be related to various screening coverages of different health insurance policies. Using the appropriate International Classification of Disease (ICD) 10 codes for clinical visits is important; billing guides have been developed for STI testing and HIV prevention that details the codes appropriate for E+M visit billing. Discussion with an insurer may be necessary. The CDC STI Treatment Guidelines detail recommended screening tests and testing intervals for reference. NACCHO also developed an STI express billing fact sheet to support clinics that already bill for services to consider how they might also bill for express services. This resource includes guidelines on billing for a variety of providers, when to use specific codes, and other tips.

Key Considerations

Whether the amount of revenue generated through express services is "worth it" must be answered by individual clinics. Cost analyses and evaluations that will contribute to a body of research on the cost-effectiveness of express services are currently underway; however, these studies will likely not take into account revenue generation as clinics in the study are currently not billing for STI express services. Therefore, with limited evidence available, clinics must consider the potential revenue generated through express services, the changes that need to be made to staffing or eligibility requirements, and the existing billing capacity and additional burden of billing for express services. These key considerations are further delineated below.

There are multiple considerations that clinics must balance in establishing billing procedures.

- *Balancing the public health benefit with clinic and program sustainability*. It is unlikely that reimbursements for express services will pay for themselves. However, billing can significantly offset operating costs, and if strong billing capacity is already in place, then the additional efforts to bill for express services might be minimal and highly beneficial. At the same time, it is also critical that STI clinics remain available to those who are uninsured, underinsured, or choose to self-pay, and that the impetus for revenue generation does not outweigh the public health mission and sustainability.
- *Billing for express services depends on a nurse-driven model; clinics might have staffing pools that do not match this requirement*. Refer to the STI express billing fact sheet for specific information regarding who can bill. Clinics might choose to rely heavily on MAs and health educators to conduct STI express services to maximize a top-of-license strategy or to ensure seamless integration with counseling, linkage to care, or other services. These staffing models might be more valuable to the clinic than the revenue generated through the provision of STI express services.
- *Only established patients are eligible for billable express visits*. For billing purposes, patients that are new to the clinic (have not been seen there within the last three years) must see a qualified provider for billing purposes. Here, a qualified provider is a classification for insurance purposes and is not a statement of quality; MDs, NPs, and physician assistants (PAs) are considered to be qualified providers for billing purposes. Therefore, to bill for STI express services, new patients would need to be routed to non-express visits. To determine how this requirement would impact your clinic, you

should consider what proportion of your patients are new and whether the number would present a significant burden to the number of non-express visits on an average day.

Intake and Triage

Summary of Evidence

Appropriately triaging patients is critical to detecting infection and ensuring that limited clinic resources are utilized efficiently.[6] Each clinic has its own criteria to determine which patients are eligible for express services. Typical express service-eligible patients include those that are asymptomatic, were not referred by public health investigators or other health care providers for testing, and are not in need of other health services, such as primary care or reproductive health.[7] Similarly, several clinics prefer that transgender patients always see providers in order to collect more accurate and comprehensive patient histories and respond to traditionally unmet primary care needs.[8,9] Finally, because clinics can't bill for express services for new patients (see Billing section), some clinics might require that new patients see providers for non-express visits in order to establish care.

Key Considerations

The initial assessment and triage can occur in several ways, including paper forms, provider triage, CASI tools, or a combination. The following are key considerations to help determine how triage could be best implemented in your setting:

- <u>Prioritizing Risk Assessment Questions</u>: The amount of time it takes to triage depends on the length of the risk assessment. Some clinics focus on the express element and develop risk assessments that take no more than five minutes to complete. Others need to collect more data for research and evaluation purposes and have developed risk assessments that take up to 20 minutes to complete. Determine what you need out of your risk assessment to help balance efficiency with data.
- <u>Physical Space</u>: Conducting risk assessments requires privacy. If clinicians complete triaging, they are likely to take patients to a separate room. However, if patients complete the screening at a kiosk, tablet, or on paper forms, then they need to be ensured privacy in the waiting room. Kiosks also take up space, so if the waiting room is already tight, consider how that will impact the number of patients that can wait comfortably to be seen.
- <u>Accuracy</u>: Patients don't always report symptoms on digital or paper risk assessments because they don't always know what symptoms are. A best practice among clinics providing express services is to conduct a brief in-person symptom screening prior to testing to confirm that symptoms have been detected and the patient is triaged appropriately.
- <u>Technology</u>: Some clinics utilize CASI tools for screening to prioritize staff time that would ordinarily be spent on screening for other tasks. CASI programs can be purchased or built within EMRs to complete risk assessments. It is important to consider the high start-up costs associated with CASI and other triage tools. Among clinics that have implemented such tools, costs ranged from $20,000–$50,000 at start up and sometimes include monthly maintenance fees. Additionally, if your clinic wants to integrate risk assessment data from such programs in EMRs, consider the costs of bridging

those systems or manually entering such data. However, many clinics choose not to store triage forms, whether completed via CASI or on paper, in order to maintain patient privacy.

Case Study

Seattle and King County, WA: The Public Health — Seattle and King County Sexual Health Clinic triages patients using a homegrown CASI, computerized algorithm, and a brief in-person symptom screening. Every patient completes a risk assessment using CASI every time they visit, assuming it has been at least three months. The clinic routes patients to three types of visits: screening, screening plus, and clinician. Indicators for non-express services are both disease-focused and health-focused. For example:

- If the patient has symptoms or was a named contact, they are routed to see a clinician.
- If the patient needs a Pap smear or has family planning needs, they are routed to see a provider if a clinician is available, but at a minimum will receive STI testing.
- Asymptomatic patients with no other health care needs are routed to express services, in which a nurse or MA also conducts a brief in-person symptom screening to confirm accurate triage. If the patient is still considered to be asymptomatic after this screening, they are provided with directions for testing.

The Public Health — Seattle and King County Sexual Health Clinic recently conducted an evaluation of their algorithm-driven triage model and found that the triage status was appropriate for 87% of men and 82% of women and had 95% and 98% sensitivity for identifying men and women, respectively, needing standard visits. The most common reason for mis-triage was patients reporting symptoms to the clinician that they did not report in CASI.[10]

Keys to Success

- Always follow paper-driven or CASI assessments with a brief in-person symptom screening to ensure that the patient is appropriately triaged.

- Ensure privacy of patients completing risk assessments by asking triage questions in a private room and providing privacy screen filters on kiosks and tablets.

Links to Resources

Throughout the STI Express Initiative, we have collected a number of risk assessment forms. Take a look and feel free to adapt them to your setting. Note that these may no longer be in use at the time of publication.

Triage & Risk Assessment Questionnaires		
Resource	Length of Questionnaire	Format
New York City Department of Health and Mental Hygiene Sexual Health Clinic (NY) Intake Form	Short	Paper-based
University of Mississippi Medical Center Express Personal Care Clinic (MS) Sexual Health Assessment	Short	Kiosk/CASI

Orange County Health Care Agency (CA) Quick Check (express) Check-In Slip and Regular Visit (non-express) Check-In Slip	Short	Paper-based
Miriam Hospital HIV/STI Clinic (RI) Intake Form	Medium	Paper-based
Public Health Sexual Health Clinic at Seattle and King County (WA) Kiosk Questionnaire	Long/in-depth	Kiosk/CASI

Patient Flow + Staffing

Summary of Evidence

Patient flow, or the movement of patients through a healthcare facility,[11] is central to the express model, which determines flow based on the intensity of care a patient requires. Patient flow looks different in every setting. Some clinics, such as Dean Street Express in London, have fully automated this process, using an automated check-in system, CASI-based triage, automated prompts when patients are ready to be seen, video instructions for sample collection, and text messages for the notification of results.[12] Most express models are not as reliant on technology and utilize front desk staff, triage nurses, MAs, and others to assist with these steps.

The clinic staffing model is extremely important in the context of STI express services. Staffing models dictate how express is implemented and influence costs. Since express services are, by definition, visits that do not include clinical examinations, express services tend to utilize registered nurses (RNs), licensed practical nurses (LPNs), and MAs, as their scope of practice excludes patient exams.
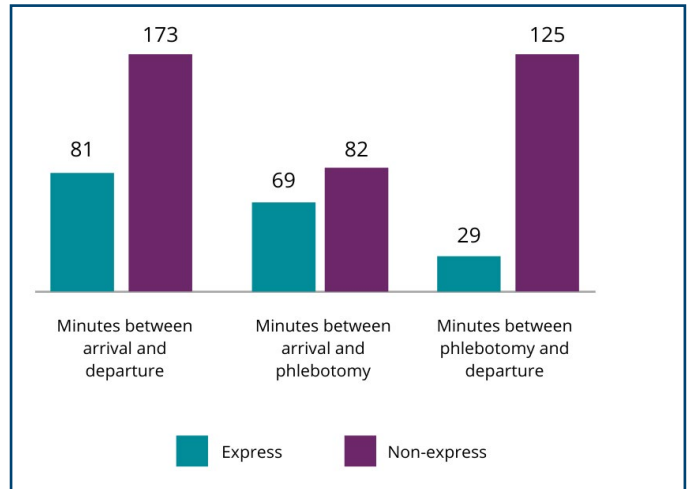
Key Considerations

Within express visit staffing models, there are a variety of possibilities. For example, the Maricopa County Department of Public Health STD Clinic (AZ) has utilized a medical records clerk to review questionnaires and triage patients and a MA to collect specimens.[13] Alternatively, the Denver Metro Health Clinic (CO) has a MA determine the appropriate visit type.[14] The staffing model selected should fit the resources and needs of the clinic. Many clinics utilize nurses to triage patients. Some key considerations include:

- Delegation: A common goal of implementing express visits is to maximize "top-of-license" strategies, i.e., each employee practices to the full extent of their license and does not perform tasks that can be conducted by someone else. The scope of work for physicians and RNs are driven by state and institutional laws, and clinics considering an express model should determine what can be conducted by whom by consulting their local/state health board and their institution's guidelines. In the Links to Resources section below are interactive tools listing physician, RN, NP, and MA scopes of practice by state. Nurses are often able to conduct certain procedures with standing orders, also known as non-patient specific orders, from a physician.
- Billing requirements: Clinics considering express services should determine how to balance top-of-license strategies with revenue generation and financial sustainability. Not all health care professionals that drive STI express services can bill for their services, and if they can, it is often at lower reimbursement rates. However, billing under standing orders is a viable option. See the billing companion guide for more information.

- Staff buy-in: Staff levels of comfort in delegating tasks may vary depending on many factors such as level of training and existing workloads. To implement express services using a range of health care professionals, providers and administrators must be comfortable with standing orders; similarly, delegate staff may require training to be comfortable administering new services. Also, if delegate staff are expected to assume duties additional to their typical workload, clinic managers will need to carefully monitor, listen, and provide support as needed to prevent burnout and overworking staff.

- Volume and capacity: Offering express services has been shown to increase the number of patients a clinic is able to see per day. Four clinics offering express services saw a statistically significant increase in the average number of patient visits per day, from 23 before implementing express services to 26 afterwards.[15] Patient volume and staffing will determine, in part, a clinic's capacity and turnaway rate. Some clinics may choose to limit their express option to specific days/times. While traditionally most STI clinics have offered walk-in visits, many have shifted to appointment-only due to COVID-19 and have indicated that they will likely offer mainly scheduled appointments with limited availability for walk-ins. When determining a schedule for express services, clinics should consider the days and times that visits are most utilized by the populations they serve, as well as the average length of an express vs non-express visit (Figure 1). Volume and capacity will change daily based on staffing, regular variations in testing practices, and the health care needs of patients, including linkage to disease intervention specialists (DIS), partner services, and treatment for those who test positive.

Figure 1: Average appointment time of patients receiving express vs. non-express visits

Statistically significant difference in minutes between express and non-express visits for all time points (p<.001)[16]

- Technology: Utilizing technology at different points along the patient flow can help staff prioritize time for certain activities. Technology—such as CASI for triage or video tutorials for self-collection of specimens—should be tailored to the population your clinic serves. Technology used to communicate with patients—especially for results notification—must be HIPAA-compliant and accessible by patients, and recurring staff training is important.

Case Study

Oakland County Health Division, MI: Oakland County modifies its express protocol based on their current staffing pool. When fully staffed, they utilize a triage nurse to determine which visit type is appropriate. This role is only made available to the highest-level public health nurses who have proven themselves to be adept at leading a team and is not always filled based on staffing vacancies. The triage nurse reviews patient assessments to determine what type of visit they should receive. If they triage a patient to "Fast Track," they paperclip a label to the front of the patient's chart, which is then returned to the clerk that originally registered the patient and placed in number order in a wall organizer. When not fully staffed, clients complete the paper Fast Track screening and it is attached to the patient chart. When nurses pick up a chart they review the screening so they have a sense of how to set up their room before calling the patient back for their appointment.

Express visits are slotted for 30 minutes and non-express visits for 60 minutes. A public health nurse calls back both express and non-express patients to conduct testing or screening. Fast track visits are then treated

the same as non-express (full testing) visits, except patients do not disrobe for physical examinations, and they are not swabbed for specimen collection; express patients only receive blood draws and urine-based screening. Oakland County's EMR has been set up to include a Fast Track checkbox that they use for reporting and auditing purposes. Patient flow might deviate from this process at end of the day triage, in which the triage nurse might determine that a patient is unable to be seen before clinic closes, and they are offered an appointment at their convenience. These patients are then given a "Direct Connect Pass" with an appointment date and time noted. The triage nurse utilizes a hand-written appointment book to set aside an appropriate block of time for the return appointment, and each morning notes all appointments for the day on a white board for the public health nurses. For Oakland County Health Department's capacity equation, please see Appendix C.

Keys to Success

- Check your institutional policy and state and local laws regarding scope of practice requirements before determining staff roles.

- Cross-train staff in a range of roles such as intake, front desk, processing lab specimens, and seeing patients to allow for flexibility in scheduling during busy periods.

Links to Resources

Scope of work by state:

- The Policy Surveillance Program: Scope of Work Descriptions (NP here) (RN here)
- Barton Associates Nurse Practitioner Scope of Practice Laws
- The American Association of Medical Assistants State Scope of Practice Laws

Clinic Flow Descriptions from STI Express Initiative participants. Please note that some of these are no longer in use:

- Seattle and King County, WA: Express vs Non-express Clinic Flow
- Denver, CO: Triage Staff Roles Matrix and Triage Protocol
- Oakland County, MI: Patient Flow and Fast Track Triage Nurse Roles and Responsibilities
- Orange County, CA: Quick Check Algorithm & Clinic Flow
- New York City, NY: Clinic Flow
- Monroe County, NY (Rochester): Patient Workflow
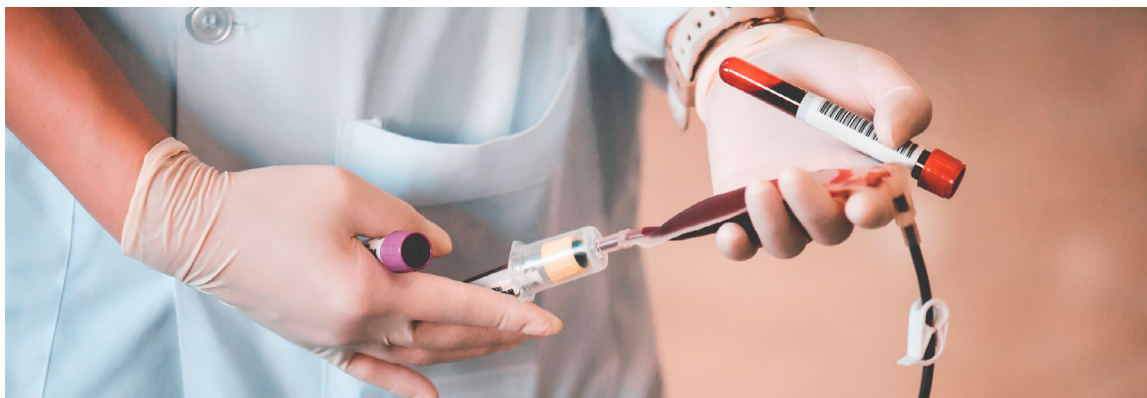
A Deeper Look: Turnaway Rate

The purpose of this case study is to consider the limitations of express services on improving clinic capacity. One local health department clinic that provides integrated express services is motivated to maximize its staffing model. When fully staffed, the clinic has 3 front desk clerks, 4 MAs, 1 LPN, 1 RN, 5 NPs, 3 linkage to care staff, and a medical doctor for consultation. All providers perform at the top of their license: NPs are authorized to conduct every type of visit and are the primary staff assigned to non-express visits. NPs are the only ones who conduct procedures and follow-up PrEP appointments. MAs primarily conduct express visits, consisting of sexual history taking, phlebotomy and rapid testing, counseling (conducted by outreach staff), and linkage-to-care, along with linkage-to-care providers who sometimes conduct visits for men who have sex with men (MSM). On average, the clinic sees seven express visits per day (range 0–16), which are typically around 20 minutes long.

Despite an optimized staffing model, the clinic's express services can't always meet patient demand. Patients that request services but cannot be seen due to capacity or timing issues are referred to as "turnaways," and one of the goals of express services is to reduce turnaway rates. Patients line up to be seen at the clinic before it even opens, and they are assigned a slot in the morning or afternoon appointment blocks. Most appointment spots for the day are gone by eight in the morning. While many of the morning patients remain in the clinic for their appointments, others return later in the day, and they are not always on time. As a result of high demand, the walk-in nature of the clinic, and space constraints like limited single restrooms that lead to patient bottlenecks and longer wait times, the clinic turns away an average of 13 patients per day. As a result of COVID-19, the clinic has switched to appointment-based visits and will likely maintain the new system even after social distancing restrictions are lifted. Clinic administrators hope that an appointment-based system, coupled with express services, will result in improvements in clinic capacity and efficiency.
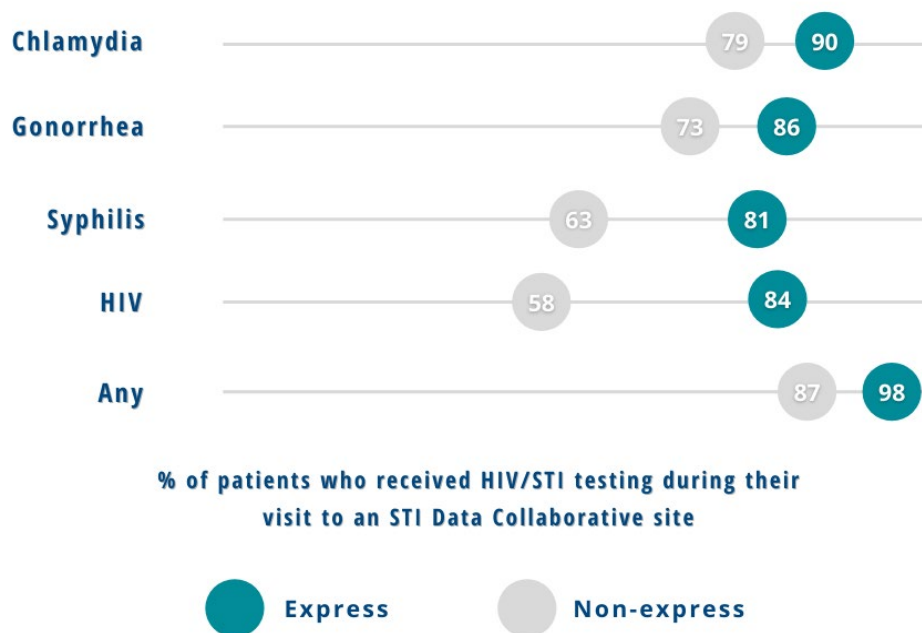
Testing

Overview

The typical package of testing for STI express services includes gonorrhea, chlamydia, syphilis, and HIV. Findings from the STI Express Data Collaborative show that express patients received package STI testing more frequently than non-express patients. The proportions of express patients who received testing for chlamydia (90%), gonorrhea (86%), syphilis (81%), and HIV (84%) at their most recent visit were higher than those for non-express patients (79%, 73%, 63%, 58%, respectively).[16]

Packaged STI Testing Rates in Express vs Non-express Visits

	Non-express	Express
Chlamydia	79	90
Gonorrhea	73	86
Syphilis	63	81
HIV	58	84
Any	87	98

% of patients who received HIV/STI testing during their visit to an STI Data Collaborative site

● Express   ● Non-express

Some clinics also include Hepatitis C testing and tests required at pre-exposure prophylaxis (PrEP) monitoring visits. Below, we discuss evidence and key considerations for three common aspects of express services: POC testing, self-collection of specimens, and lab testing.

Point-of-care testing

Summary of Evidence

POC testing is ideal when available, affordable, and sufficiently accurate, as it provides opportunities for rapid detection and treatment. True POC tests exist for HIV, HCV and syphilis, while gonorrhea and chlamydia have near POC tests.

Key Considerations

- Cost: Some POC and near POC tests require specific equipment. Given rapidly changing technology and laboratory implications, clinics may want to consider renting, rather than purchasing, POC testing equipment.
- Patient Flow: Turnaround times for POC tests vary significantly, ranging from a few minutes to 90 minutes. Many patients prefer not to wait for results, and many clinics do not have the capacity for such patients to remain in their waiting areas. Thus, if patients are positive they must return for treatment at a later date, so the benefit of a same-day turnaround time might not be fully realized. Future, faster tests may allow for express patients with positive results to receive same-day treatment.

Self-Collection and Lab Testing

Summary of Evidence

Self-collection of specimens has multiple clear benefits for clients and providers. There is strong evidence that patients are able to successfully collect samples by themselves, given proper instructions.[17] Evidence also shows high patient satisfaction, with patients finding self-collection easy and comfortable.[18,19] Because express patients don't see providers, most clinics implement self-collection protocols for swabs and urine for gonorrhea and chlamydia and have another provider collect serum for HIV and syphilis. The majority of clinics that offer express services utilize self-collection of samples.

Key Considerations

- Physical space: Clinics should have an adequate number of single-occupancy bathrooms and clear patient instructions for collection and what to do with the samples.
- Instructions: It is important for clinics to include body-specific, rather than gender-specific, language to protect and respect the bodily autonomy of their patients, and to ensure that patients utilize the most sensitive tests available. The instructions for what to do with samples will be specific to each clinic and might look like the sample below from the San Francisco City Clinic (CA). A guide to self-collection in clinical settings is forthcoming from the CDC, and additional resources can be found under "Resources" below.
- Validation: The *Recommendations for the Laboratory Based Detection of Chlamydia trachomatis and Neisseria gonorrhoeae, 2014* details testing modalities and performance of provider and self-collected testing. For extragenital testing, no platform is approved for self-collected swabs, whether collected in the clinic or elsewhere, though extragenital testing platforms were cleared by the FDA in 2019 for clinician-collected testing. The only tests that are FDA cleared for self-collection in a clinic setting are urine and vaginal samples as listed in the Laboratory guidelines. CLIA-regulated laboratory validation requirements for self-collection of genital and extragenital testing need to be reviewed and addressed by the clinic's partner laboratory if the testing being undertaken is not FDA-cleared for this purpose.

Case Study

San Francisco City Clinic, CA: San Francisco City Clinic utilizes POC testing and has a non-clinician express lane for PrEP follow-up visits. They have not yet implemented express services for other visit types. Patients who present for routine PrEP monitoring visits receive a self-collection bag from the registration desk with supplies and instructions. After collecting their specimen in a private bathroom, the patient puts the specimen in a container outside of the bathroom and pushes a doorbell, notifying a staff member to retrieve it. The clinic laboratory staff run the specimen on the Cepheid GeneXpert™. There is a unidirectional interface between the machine and the clinic EMR, such that the results are immediately available to the provider, and the patient can also view them on a secure online portal. The turnaround time for this POC test is approximately 90 minutes and therefore patients are encouraged not to wait in the clinic. Patients are told that "no news is good news." If they have positive results, they receive a text message saying that their results are ready so they can return to the clinic for treatment.

Keys to Success

- The language and images in your self-collection instructions should be culturally relevant and accessible by your patient population. Have your instructions reviewed by a health literacy organization, translator, and/or members of priority populations visiting your clinic, and ensure that translations are accurate and specific.

> • Unless test specimens are processed in the clinic, billing for extragenital gonorrhea and chlamydia tests is usually performed by the laboratory performing the NAATs. Laboratories will use the current procedural terminology (CPT) codes for gonorrhea and chlamydia tests: 87491 (chlamydia) and 87591 (gonorrhea). NAATs performed on the same date but from different anatomic locations will need a modifier code added to the CPT code to be reimbursed. The modifier "59" indicates that the test is for "multiple specimens/sites," as "87491-59" for example.

Links to Resources

- University of Washington STD Prevention Training Center (WA): Self-testing visual aids
  - Order free, high-quality prints of pharyngeal, rectal, and vaginal self-testing visual aids in English and Spanish by visiting the "Resources" page at www.uwptc.org
    - Vaginal Self-Test (English sample)
    - Vaginal Self-Test (Spanish sample)
    - Pharyngeal Self-Test (English sample) – sample not available in Spanish
    - Rectal Self-Test (English sample) – sample not available in Spanish
- San Francisco City Clinic (CA): Sample instructions for specimen drop-off following self-collection

Results Notification

Summary of Evidence

Notifying patients of positive test results represents another critical opportunity to gain efficiency and reduce time to treatment.[21] Clinics utilize a combination of methods for contacting patients with results: calling the patients with positive results, call-in lines supported by staff, texting programs, and EMR notifications. Each clinic handles this differently. Some tell patients that no news is good news and that they will only hear back for positive results. Others notify all patients regardless of results. Clinics might also change how they notify patients of results based on current staffing capacity.

Key Considerations

- Informatics infrastructure: Given frequently changing phone numbers, contacting patients is difficult whether your notification infrastructure involves manual calls by staff or sophisticated texting/automatic notification. When clinics have the ability for lab results to be uploaded into EMRs automatically, patients receive their results at the same time as the provider. For example, one clinic implementing this model has had patients learn of their results and present for treatment before the provider reviewed results and contacted them for follow-up.
- Financial resources: Building out automatic integration of EMRs and notification platforms sometimes requires high start-up costs. Many EMRs include online patient portals, such as MyChart ® – Powered by Epic ®, but creating or adding specialized platforms—such as those with texting

Satisfaction survey questions and responses	Total (N=391)	
	n	%
How do you prefer to receive testing results?[1]		
Phone call	191	48.8
Electronically through a patient portal	133	34.0
Text message	132	33.8
In person	58	14.8
Other	20	5.1

[1] Numbers add up to more than 100% because survey respondents were able to select or write-in more than one option

capacity—can be expensive. Some clinics opt to forego online portals and use secure voice messages, but this may require more staff time to call and track patients.

- Patient preference: Clinics should decide which options they are able to offer and whether they can give patients a preference. In a survey of patients at three participating STI Express Initiative sites, respondents significantly preferred phone calls to receive results over other forms of communication such as texting.[22] This was even the case for younger patients. Some clinics use text-based platforms in which patients receive texted results after entering a PIN rather than having to enter an online portal. However, start-up costs for such a platform may be high, and patients are likely to forget their PINs.

- Follow-up: Some clinics instruct patients that no news is good news, meaning that they will not be contacted if no results are positive. Others instruct patients to call a results line if they have not heard from the clinic, though this can be anxiety-inducing for some patients. Frequently changing phone numbers can make follow-up difficult.

Case Studies

St. Louis County Department of Public Health (MO): The STD clinic utilizes both a portal and a phone system. Patients who sign up for the portal receive all results there. Patients can also call a voice portal and leave a message that a nurse will return and DIS call all patients with positive results. Because phone numbers change frequently, follow-up can be difficult, but the clinic asks for both home and cell phone numbers.
San Francisco City Clinic (CA): Patients are told that no news is good news and are able to review all of their test results on a secure online portal. When a patient tests positive for gonorrhea or chlamydia using the POC test, clinic staff send them a text message that says, "Your results are ready. Please come to the clinic." Even though the message does not include it directly, patients know that means they have a positive result. Patients provide consent for texting at registration, but if they don't give consent, then a provider will call with results. Even with POC testing, most patients leave before their results are ready, which is encouraged as it optimizes flow, prevents crowding in the waiting room, and is preferred by patients.
Seattle/King County (WA): Patients are notified in three different ways. There is a results line staffed by DIS that operates from 12-1pm each day. When patients leave their visit, they receive a card with the results line phone number and are told when to expect results. Patients also have the option to sign up for MyChart ® – Powered by Epic ® via MAs, and if they do, they receive push notifications with results. Lastly, clinicians review all abnormal labs and makes note of what treatment is required and then send to DIS to call patients.
Howard Brown Health Center in Chicago (IL): Results are delivered utilizing the online web-based portal Healthvana®. This system is also used for registration and data collection purposes. Patients automatically receive an email and text message when their results are available and can log in to the portal to view the results. For positive results, the health educator who conducted the screening visit calls the patient directly to explain their results before results are made available in Healthvana®. For positive syphilis results, patients are additionally contacted by a member of the partner services team to conduct an original interview. All abnormal results are reviewed and signed off on by a medical provider.

Keys to Success

- If capacity allows, offer multiple avenues for results notification (e.g., a results phone line plus an online portal) so patients can access results in a way that best meets their preferences.

- If you conduct a patient satisfaction survey, include a question about how patients prefer to receive testing results. If all patients would prefer a phone call, then investing in more sophisticated technology might not be worthwhile.
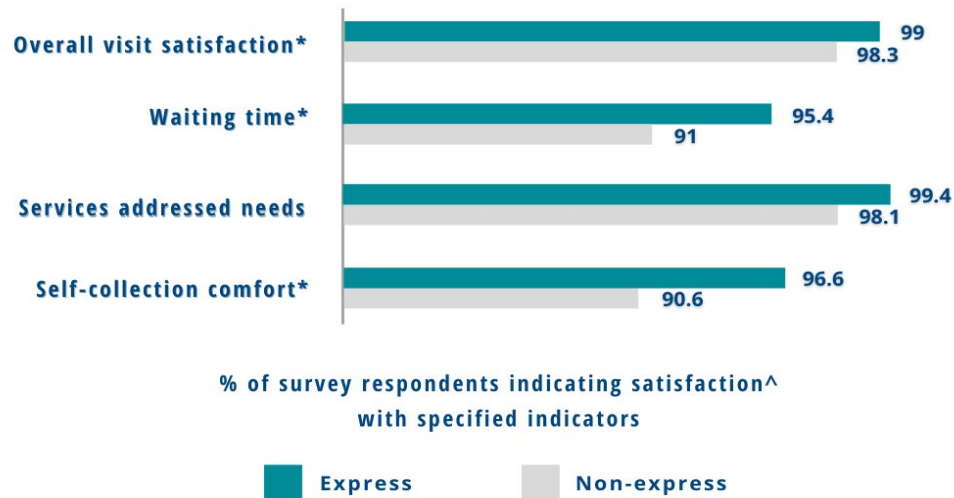
Patient Satisfaction and Engagement

Summary of Evidence

Patients report high levels of satisfaction with STI services, regardless of whether they receive express or non-express services. However, results suggest that overall patient satisfaction is higher among express compared to non-express patients. In an analysis of 1,402 satisfaction surveys, collected from paper and electronic surveys across 13 clinics in seven jurisdictions, 100% of express patients (n=606) and 98% of non-express patients (n=743) reported being satisfied with their clinic visits. This difference was statistically significant when adjusting for site.[23] In addition, the odds of reporting that the "length of time spent waiting was ok" was twice as high among express compared to non-express patients.[24] For more information about patient satisfaction across different demographics during the STI Express Initiative, see _Evaluating Sexually Transmitted Infection Express Services: Findings from a Multi-Site Data Collaborative_.

Key Considerations

Patients at sites participating in the initiatives expressed high satisfaction with express services, staff, and clinic environment: in the survey described above, 95% of respondents were satisfied with waiting time; 99% expressed that the services provided addressed their needs; 97% were comfortable self-collecting samples, and 99% reported overall satisfaction. Note that survey respondents were not typically aware of which type of service they received (express or non-express), so survey questions and results are not specific to a particular type of visit.

Satisfaction with STI Clinic Visit

Indicator	Express	Non-express
Overall visit satisfaction*	99	98.3
Waiting time*	95.4	91
Services addressed needs	99.4	98.1
Self-collection comfort*	96.6	90.6

% of survey respondents indicating satisfaction^
with specified indicators

■ Express   ☐ Non-express

*Statistically significant (chi-squared p-value <0.01)

^ Satisfaction indicated by survey response of "strongly agree" or "somewhat agree" to list of statements. Non-satisfaction indicated by "no opinion," "somewhat disagree" or "strongly disagree."

Top 5 patient considerations when choosing a clinic to receive testing

1 — High quality care
2 — Being treated with respect
3 — Confidentiality
4 — Wait time
5 — Cost

Keys to Success

- Different populations may experience or prioritize elements of the health care interaction differently. Patient satisfaction surveys, combined with demographic data, can assist service providers and planners in understanding and reaching priority populations.

- Because most express services are integrated into existing clinic flows, patients are often not aware of the type of service they are receiving. Clinics that offer integrated express services — rather than standalone express clinics — should be wary not to market those services as "express," depending on how long visits take, because it could lead to lower levels of patient satisfaction.

Links to Resources

- STI Express Initiative Patient Satisfaction Survey (English) (Spanish)

Monitoring and Evaluation

While piloting and implementing express services, ongoing data collection is crucial to understanding the role of express in reaching your clinic's goals and populations. Monitoring and evaluation (M&E) of key indicators can help your clinic continuously improve service delivery, make decisions about service prioritization, and contribute to the growing body of evidence about the effectiveness of express models. Below, we outline key categories to consider as part of M&E efforts.

Key Considerations

Clinics implementing STI express visits should collect data across multiple broad categories:

1. Express patient characteristics
2. Clinic capacity and flow, including patients' wait and "toes in, toes out" time

3. Treatment
4. Patient satisfaction
5. Cost evaluation

Clinics should aim to answer questions about the impact of express visits on elements such as the patient populations served, visit scheduling, positivity rates, and rate of return for treatment using targeted metrics and variables.

To aid this process, an STI Express Evaluation Framework is included in the appendix as a recommended list of indicators to monitor while implementing express visits. The framework, organized by the categories listed above, includes core and optional variables clinics should consider as part of their M&E plans. The recommended variables are neither mandatory nor comprehensive but can be used as a jumping off point—it will not be possible for all clinics to monitor every variable listed. Below, we discuss challenges to data collection experienced during the STI Express Initiative that clinics implementing express visits should be mindful of.

Challenges in Data Collection

Certain variables are complicated to evaluate due to the nature of express visits, such as:

- Treatment: Empirical treatment offered during non-express visits may not be reflected in data regarding rate of return for, or time to, treatment.
- Patient characteristics: Consider a clinic's triaging practices when evaluating any effect of express services on patient characteristics (for example, some clinics triage all transgender patients to non-express visits).
- Turnaway rate: It is difficult to measure the number of patients turned away due to low clinic capacity without counting at the door.
- Time study: Having a sense of patients' wait and overall visit time is critical to measuring improvement. Most EMRs cannot be used for this function because they are not reflective of true wait and visit times, but rather when patient files are created and closed. Therefore, the best practice is to conduct a time study over several days in which patients are tracked as they enter and progress through a visit. However, because these studies are time intensive and can be costly depending on how they are conducted, many clinics are not able to collect this data.
- Cost evaluation: Such analyses require close collaboration with the finance team and knowledge of how resources are allocated to express and non-express patients.

Keys to Success

- Consider how you intend to use M&E data and prioritize what to add. Making changes to EMRs can be costly and time-consuming. Therefore, it is likely that you will have to limit the creation of new variables. If assessing testing among priority populations is critical, consider what else you need to know about your patient population and build out the demographics section. If you can't make EMR changes, consider what you can do outside of that system, such as through patient satisfaction surveys or temporary paper-based data collection.

- STI programs should consider the evaluation of STI express services within states, territories, or local jurisdictions to identify promising practices and areas for improvement. STI programs can help to harmonize data collection so that improvements and changes can be assessed over time.

Acknowledgements

Participating Clinics and Jurisdictions

Participating Clinic	City/County	State
17th Street Testing, Treatment and Care Clinic, Orange County, CA	Orange County	CA
County of San Diego Health and Human Services Agency	San Diego	CA
Los Angeles County Department of Public Health	Los Angeles	CA
Sacramento County	Sacramento	CA
San Francisco City Clinic	San Francisco	CA
Denver Metro Health Clinic	Denver	CO
Jefferson County Public Health	Lakewood	CO
Larimer County Health Department	Fort Collins	CO
D.C. Department of Health	Washington	DC
Florida Department of Health in Clay County	Green Cove Springs	FL
Florida Department of Health in Miami-Dade County	Miami	FL
Florida Department of Health in Orange County	Orlando	FL
Gwinnett, Newton, & Rockdale County Health Departments	Lawrenceville	GA
Cerro Gordo County Department of Public Health	Mason City	IA
Chicago Department of Public Health	Chicago	IL
Howard Brown Health Center	Chicago	IL
Shawnee County Health Department	Topeka	KS
Louisiana Office of Public Health	Baton Rouge	LA
Commonwealth Medicine & Massachusetts Association of Public Health Nurses	Charlestown	MA

Fenway Health	Boston	MA
Baltimore City Health Department	Baltimore	MD
Howard County Health Department	Columbia	MD
Prince George's County Health Department	Largo	MD
Worcester Health	Pocomoke	MD
Ingham County Health Department	Lansing	MI
Jackson County Health Department	Jackson	MI
Oakland County Health Division	Southfield	MI
Ottawa County Department of Public Health	Holland	MI
St. Charles County Department of Public Health	St. Charles	MO
St. Louis County Department of Public Health	St. Louis	MO
University of Mississippi Medical Center	Jackson	MS
Beaufort County Health Department	Washington	NC
Forsyth County Department of Public Health	Winston-Salem	NC
Person County Health Department	Roxboro	NC
Douglas County Health Department	Omaha	NE
University of Nebraska Medical Center	Omaha	NE
Burlington County Health Department	Westampton	NJ
Southern Nevada Health District	Las Vegas	NV
Monroe County STD Clinic/University of Rochester Center for Community Practice	Rochester	NY
New York City Department of Health and Mental Hygiene, Bureau of Sexually Transmitted Infections	New York City	NY
Westchester County Department of Health	White Plains	NY
Galion City Health Department	Galion	OH
Oklahoma City-County Health Department	Oklahoma City	OK
Rhode Island Department of Health	Providence	RI
Rhode Island Public Health Institute	Providence	RI
Rhode Island STD Clinic	Providence	RI
South Carolina Department of Health and Environmental Control	Columbia	SC
Metro Public Health Department Nashville/Davidson County STD Clinic	Nashville	TN
Angelina County & Cities Health District	Lufkin	TX
Bell County Public Health District	Temple	TX
Galveston County Health District	Texas City	TX
San Antonio Metropolitan Health District	San Antonio	TX
Tarrant County Public Health	Fort Worth	TX
Thomas Jefferson Health District	Charlottesville	VA
Virginia Department of Health	Richmond	VA
Public Health-Seattle and King County STD Clinic	Seattle	WA
Tacoma Pierce County Health Department	Tacoma	WA
Kenosha County Division of Health	Kenosha	WI
Public Health Madison Dane County	Madison	WI
Winnebago County Health Department	Oshkosh	WI

Appendix

Description of Sources

Community of Practice: NACCHO hosted a "Community of Practice" (CoP) from 2018–2020 in which participating STI clinics contributed to monthly discussion calls and evaluation activities related to the implementation of STI express services. The CoP was designed to increase the knowledge base for express services, advance local efforts to establish or expand these services, and inform the development of this resource to support implementation of express STI clinic visits. The first cycle of the Community of Practice took place over 12 virtual meetings from February 2018 through March 2019 with staff from 15 participating high-morbidity STI clinics who were implementing, or planning on implementing, express STI clinic visits. From August–December 2019, the Community of Practice opened its meetings to any interested public STI clinic or similar healthcare organization, convening over six virtual meetings discussing challenges, best practices, and opportunities related to the provision of express STI clinic visits.

STI Express Data Collaborative: Seven STI clinics and/or clinic networks participated in a data collaborative from 2019–2020. Sites received $30,000 each to refine an evaluation plan collaboratively, collect site-level data and share with NACCHO and CDC for analysis, discuss implications of the analyzed data critically and collaboratively, consider quality improvement efforts, and share and discuss their express models to support the scale up and replication of promising practices. The project resulted in analyzed site-level outcomes data that provided critical information about STI express services and informed data-driven improvements to current practices.

In-depth projects: From 2018–2019, NACCHO and Cardea conducted on-site, in-depth assessments with three clinics planning to implement STI express services. We discussed goals, motivations, and barriers with clinic leadership and other stakeholders, interviewed community partners, toured clinics, and provided feedback regarding operational plans. Though the resulting reports are not available to the public, the executive summary can be viewed here.

Clinic-provided resources: Multiple participating clinics provided resources such as clinic flow diagrams, staff responsibility descriptions, and client-facing surveys or instructions. Those referenced in this document are linked to documents online.

Data Collaborative Evaluation Framework

STI Express Data Collaborative Evaluation Question Framework			
Patient Characteristics	**Metrics**	**Core Variables**	**Optional Variables**
What are the characteristics of patients receiving express services? How are express service patients the same or different from the general patient population? Do express services attract new patients to the clinic from priority populations? How often do patients receive express services?	Patient demographics Proportion of patients who are new patients to clinic Average number of express visits per patient Average length of time between visit	Unique identifier Age/date of birth Zip code Gender identity Race Ethnicity Language Sexual behavior New patient	Sexual identity/orientation Sex assigned at birth Health insurance Income (billing data) Census tract or other geographic data Additional characteristics (substance use, housing, etc.)
Clinic Capacity & Efficiency	**Metrics**	**Core Variables**	**Optional Variables**
What effect do express services have on a clinic's capacity to see patients? What effect do express services have on clinic efficiency? What proportion of patients are accurately triaged for appointments?	Number of visits (per day, per staff) Number unique patients Average length of time of appointments Number of patients turned away Average patient wait time Proportion of patients accurately routed to express services	Date of visit Time of arrival for visit Visit type (express, clinician, other) Tests ordered, by type of STI Time patient leaves clinic	Express eligibility Time of phlebotomy Time of consultation/rapid results notification Patient turnaway data
Treatment	**Metrics**	**Core Variables**	**Optional Variables**
How are positivity rates the same or different from the general clinic population? What effect do express services have on days to treatment initiation? What effect do express services have on rates of treatment follow up? Are express visit patients provided EPT at follow up? What effect do express services have on PrEP uptake in a clinic?	Positivity rates, by type of STI Days to treatment initiation Proportion of patients with positive test results who return for treatment Days to notification of positive test result Proportion of patients provided EPT at follow up Proportion of express patients who initiate PrEP	Date result posted from the lab Test result Follow up appointment date Date treatment prescribed	Date patient notified of positive result Number of contact attempts Follow up appointment scheduled EPT provided Currently on PrEP PrEP counseling conducted Interested in PrEP PrEP follow up appointment scheduled PrEP initiated

[Click here for the PDF version](#)

Patient Characteristics	Metrics	Core Variables	Optional Variables
What factors are patients looking for in an express visit? To what extent are patients satisfied with express services? To what extent are patients comfortable with the staff and clinic environment? What can be improved about express visits?	Proportion of patients that are satisfied with the visit, staff, clinic environment and services they receive Proportion of patients that feel safe and respected during the visit Proportion of patients likely to recommend clinic to someone they know	I am satisfied with my visit today Satisfaction Likert grid: wait time, experience with staff, services received, clinic hours, clinic look and feel I had confidence in the health care professionals I saw during my visit I felt cared for during my visit My questions were answered during my visit What is most important to you when you choose a location to receive testing? Cost, wait time, being treated with respect, confidentiality, convenient hours, high quality care, location of clinic, fast turnaround of results, safety, other On a scale from 0 to 10, how likely are you to recommend testing at this clinic to someone you know What can we do to improve our services? Please share any additional comments Demographic variables- age, race/ethnicity, gender	Additional satisfaction questions: kiosk/intake process, amount of time with staff I felt comfortable self-collecting samples Instructions during my visit were easy to understand How did you find out about this site/Why did you come to this site to receive testing? What additional services do you wish you had received? Have you received testing at this clinic before? [If Yes] why do you choose to receive testing at this clinic? Were you given information about why you needed certain tests in a way that you could easily understand? How do you prefer to receive testing results? Electronically in a patient portal; phone call; text message; other Staff made me feel respected Did you have enough say about the services you received today?
Economic Evaluation	**Metrics**	**Cost Analysis**	**Cost Effectiveness**
What are the costs associated with establishing and maintaining express services in various STI program settings? Are express services cost effective?	Cost per patient Cost per case detected/ treated	Number of patients Tests ordered, by type of STI Number of positive tests Number of patients prescribed treatment Average appointment time	Clinician visit costs and outcomes Cases averted Costs averted

Evaluation: Variable Checklist for STI Express Clinics

[Click here for a PDF version](#)

Evaluation Topic	Field Name	Express	Clinician	Additional Comparison Group
Core Variables				
Patient Characteristics	Unique Identifier			
	Age/DOB			
	Zip Code			
	Gender Identity			
	Sexual History (last 12 months)			
	Extragenital exposure (yes/no) (last 30 days or last sex?)			
	Number of sexual partners (last 12 months)			
	Sex of sex partners (last 12 months)			
	Race			
	Ethnicity			
	Language			
	New patient (y/n)			
Capacity and Efficiency	Date of visit			
	Time of arrival for visit			
	Visit type (express, clinician, other)			
	Tests ordered, by type of STI (Chlamydia, gonorrhea, syphilis, HIV)			
	Time patient leaves clinic/end of appt			
Treatment & PrEP	Date result posted from lab			
	Test result (positive/negative), by type of STI (Chlamydia, gonorrhea, syphilis, HIV)			
	Follow up appointment/return visit date			
	Date treatment prescribed			

Patient Satisfaction	Overall, how satisfied were you with your visit today?		N/A	N/A
	Satisfaction likert grid [wait time, experience with staff, services received, clinic hours, clinic look and feel]		N/A	N/A
	I had confidence in the health care professionals I saw during my visit		N/A	N/A
	I felt cared for during my visit		N/A	N/A
	My questions were answered during my visit		N/A	N/A
	What is most important to you when you choose a location to receive testing? [Cost, wait time, being treated with respect, confidentiality, convenient hours, high quality care, location of clinic, fast turnaround of results, safety, other]		N/A	N/A
	On a scale from 0 to 10, how likely are you to recommend testing at this clinic to someone you know		N/A	N/A
	What can we do to improve our services?		N/A	N/A
	Please share any additional comments		N/A	N/A
	Demographic Variables- age, race/ethnicity, gender identity, zip code		N/A	N/A
Optional Variables				
Sexual identity/orientation				
Gender at birth				
Health insurance				
Income (billing data)				
Census tract or other geographic data				
Additional characteristics [substance use (heroine, cocaine, methamphetamine), housing, transactional sex (yes/no), etc]				

Eligible for express (y/n)			
Time of phlebotomy			
Time of consultation			
Patient Turnaway Data			
Date patient notified of positive result			
Number contact attempts			
Follow up appointment scheduled (y/n)			
Date treatment completed			
EPT provided during follow up (y/n)			
Currently taking PrEP (y/n)			
PrEP counseling conducted (y/n)			
Interested in PrEP (y/n)			
PrEP follow up appointment scheduled (y/n)			
PrEP initiated (y/n)			
Additional satisfaction questions: Kiosk/intake process, amount of time with staff		N/A	N/A
I felt comfortable self-collecting samples		N/A	N/A
Instructions during my visit were easy to understand		N/A	N/A
Staff made me feel respected		N/A	N/A
Were you given information about why you needed certain tests in a way that you could easily understand?		N/A	N/A
Did you have enough say about the services you received today?		N/A	N/A
What additional services do you wish you had received?		N/A	N/A
How did you find out about this site/why did you come to this site to receive testing?		N/A	N/A
Have you received testing at this clinic before? [If Yes] why do you choose to receive testing at this clinic?		N/A	N/A
How do you prefer to receive testing results? Electronically in a patient portal; phone call; text message; other		N/A	N/A

Data Dictionary

Click here for a PDF version of the data dictionary used in the STI Express Data Collaborative.

Oakland County Health Division (MI) Capacity Equation

The Triage Nurse will utilize a "capacity equation" to determine how many clients can be seen in the last two hours of the clinic day. For example: To determine how many full STD testing visits (estimated at 1 hour each) can be accommodated the Triage Nurse would calculate:

(Number of PHNs OR Number of exam rooms [whatever number is less])x hours remaining in day = **full visits which can be accomodated**. Multiply this number by 2 for Express Visits.

For example: It is 3:00 PM and the waiting room is exploding with walk-in clients. There are 7 exam rooms but only 6 nurses working until 5PM.

6 nurses x 2 hours = **12 full visits remaining, or 24 express visits**, or a hybrid of the two types.

*The equation only works in a perfect world, where visits never last longer than 50 minutes or so. For this reason, we always build in wiggle room and omit one PHN from the equation. You also have to consider if 2 nurses just grabbed charts at 2:55 then they can't be part of the 3:00 PM–4:00 PM equation.

Once the clinic has reached capacity, the Triage Nurse will assess clients for any high-risk category such as: DIS referrals, contacts to known cases, pregnant women, and treatments. These clients will be seen on the same day. The clients not meeting these criteria will be offered an appointment to return at their convenience.

- Clients will be given a Direct Connect pass with their appointment time and date written on the pass. The Triage Nurse should sign the pass and indicate an expiration date of one week after the appointment date.
- The Triage Nurse will use an appointment book to note the appointment with the client's name and Insight number. Thirty-minute slots will be used for Fast Track visits and sixty minutes for Full Testing visits.
- No more than one appointment per hour will be scheduled.

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