



Lessons from sustainability of Play Streets in the United States

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ABSTRACT

Communities around the world lack safe places for children to play and be physically active. One solution to this issue is Play Streets, which involves the temporary closure of streets for several hours to create a safe space for active play and physical activity. While the benefits of these programs are greater when they are recurring over many years, there is a dearth of literature regarding how to successfully sustain Play Streets. To understand how Play Streets can be sustained in the long term, we conducted semi-structured interviews with 24 Play Streets organizers representing 22 Play Streets programs across the United States. Four recurring sustainability challenges were highlighted from the thematic analysis: 1) securing and sustaining funding, 2) managing community and city resistance to street closures, 3) navigating government bureaucracy, and 4) retaining interest amongst organizers and volunteers. With each challenge, we describe how Play Streets organizers navigated those challenges, with a goal of generating recommendations for those wishing to sustain Play Streets programs in the long term.

1. Introduction

Regular physical activity (PA) in youth helps build healthy bones and muscles, reduces anxiety and stress, increases self-esteem, and may improve blood pressure and cholesterol levels (Janssen & LeBlanc, 2010). Yet nearly 3 out of 4 adolescents in the United States (U.S.) do not meet aerobic PA guidelines of being physically active at least 60 min per day (Guthold et al., 2020). A similar level of inactivity exists for school-going children (The Child & Adolescent Health Measurement Initiative, 2016), with an even higher prevalence of inactivity among school-going girls (Branscum & Bhoohibhoya, 2016).

Features of the built environment, including the presence of sidewalks and parks, street connectivity, and traffic patterns have been associated with PA among children (Aarts et al., 2010; Handy et al., 2002). However, built environment characteristics positively associated with PA are often lacking in many historically marginalized and underserved communities (Xu & Wang, 2015). Moreover, in these same communities, spaces for PA are often perceived by parents as unsafe for children due to crime and violence or traffic (Veitch et al., 2006). The

COVID-19 pandemic exacerbated these disparities as opportunities for school-based PA, such as recess, organized sports and recreation, physical education classes, and facilities such as playgrounds, were lost when schools were closed (Esmonde & Pollack Porter, 2020).

One strategy used by communities in the U.S. and internationally to increase access to safe places for active play and PA is Play Streets. Unlike the permanent closure of streets through the “Spielstraßen” in Germany or “Superblocks” in Spain, in the U.S. Play Streets involves the temporary closure of streets for a specified time (around 3–5 h). These programs can be recurring or episodic. Play Streets can include providing play equipment (e.g., playground balls, hula hoops, jump ropes), supervision, and food to those who attend. Play Streets can also be adaptable to a communities’ needs and available resources, which means there is significant variation in terms of how they are implemented. For example, in rural areas Play Streets have occurred on parking lots instead of streets when it has not been feasible to close a main artery in a community (Pollack Porter & Umstatt Meyer, 2019). Despite this variation, there is evidence regarding the potential impacts of Play Streets for creating opportunities for active play and PA, as well

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as building community connections and trust (Bridges et al., 2020; Pollack Porter et al., 2019; Umstadd Meyer et al., 2019a).

Because of the potential of Play Streets for promoting children’s health, across the U.S., Play Streets have been gaining in popularity (Kuhlberg et al., 2014). In addition, during the COVID-19 pandemic, numerous communities temporarily closed streets, or slowed down traffic, to make space for people to be outdoors safely and physically distanced (National Association of City Transportation Officials, 2020). Many public health champions are advocating for these changes brought about by the pandemic to be permanent (Honey-Rosés et al., 2020), thereby raising questions about how to best sustain these efforts.

Proctor et al. (2011) define sustainability as “the extent to which a newly implemented treatment is maintained or institutionalized within a service setting’s ongoing, stable operations” (p. 66). This ongoing maintenance is not limited to the period after initial funding because in some instances, initial funding can evolve into ongoing support from the same source. Moreover, sustainability may require essential adaptations to continue generating benefits for the intended population (Moore et al., 2017).

There has been some research examining the implementation and impacts of Play Streets (Pollack Porter et al., 2019; Pollack Porter et al., 2020; Umstadd Meyer et al., 2019a; b). One systematic review of the grey literature showed hardly any documentation of how Play Streets have been sustained (Bridges et al., 2020). There is a gap in knowledge about how to keep Play Streets going once they are initiated, which is critical as they continue to gain in popularity. To fill this gap, we used semi-structured interviews to examine Play Streets sustainability. We focus this paper on challenges, including recommendations for practitioners to address these challenges during future implementation efforts.

2. Methods

2.1. Data and sampling

Drawing on two published reviews of Play Streets (Bridges et al., 2020; Umstadd Meyer et al., 2019b), Internet searches, and suggestions from key informants, we assembled a list of Play Streets in the U.S. that were in existence in Summer 2019. The final list contained 35 Play Streets locations. To the best of our knowledge, these represent all locations in which Play Streets were implemented more than once (Table 1).¹ The key informants’ roles in Play Streets ranged from salaried government employees or employees of organizations in charge of implementing Play Streets, to community members who volunteered to organize Play Streets for that block. All were knowledgeable about primary organizational issues of Play Streets.

[Table 1].

Attempts were made to contact organizers via email or phone. At least two messages were left for each location prior to ceasing contact. We did not receive responses from 8 locations. In 5 locations, we received a return response initially, but were not able to schedule an interview. For 7 locations, at the suggestion of the first organizer

Table 1
Number of Play Streets locations by geographical area.

	East Coast	West Coast	Other	Total
Contacted	17	10	8	35
Completed	8	6	8	22

¹ A location was defined as a town or city where Play Streets has occurred or is still occurring. Some large cities had more than one Play Streets program being run by separate organizations, and each was considered a different location.

contacted, a second Play Streets organizer participated on the interview. In two locations (Chicago, Wauwatosa), we held two separate interviews with different representatives from one location. Thus, we conducted 24 total interviews from 22 distinct locations.

The interview guide built on prior studies of Play Streets (Pollack Porter et al., 2019; Pollack Porter et al. 2020) which informed the questions we asked. The questions were pilot tested with a handful of people involved in the prior study. The interviews included questions about the main impacts for parents, children, and communities; core components for a successful Play Street; if evaluation data is collected; main challenges; key lessons for other communities putting on Play Streets; funding; policies that support or hinder Play Streets implementation; if Play Streets were sustained; and the key factors to support their sustainability.

All procedures were approved by the [University] Institutional Review Board. Participants were read an oral consent form prior to the interview and were not compensated for their time. Interviews, which took place over Zoom, lasted between 30 and 45 min, and were recorded and transcribed verbatim.

2.2. Analysis

Content analysis was used to analyse the data (Stemler, 2000). A codebook was developed based on the research questions and a read-through of all transcripts. Two of the study authors validated the codebook by double-coding a random selection of 25% of the transcripts. The two investigators who were involved with double coding met to review the codes. There was 100% agreement for the codes, with nearly perfect agreement for the additional contextual information.

Following the analysis of each interview transcript, themes across the transcripts were generated. These themes are presented below.

3. Results

Table 2 summarizes the 22 Play Streets programs that were included in this study. At the time of the interviews, 20/22 Play Streets were ongoing, meaning more Play Streets were planned beyond 2019. Except for the Play Streets in Chicago, New York, and San Francisco, most of the Play Streets occurred in small to medium-size suburban areas. Nearly all the Play Streets were recurring, with one Play Streets program (Jackson Heights, NY) being a permanent closed street for the benefit of neighbourhood residents. In a few locations, Play Streets occurred once per year, primarily coupled with health and medical screenings/fairs. There was significant variation in how the Play Streets were funded, ranging from government budgets, grant funding, donations, or private organizations and philanthropy. The demographics of the neighbourhoods ranged significantly, from economically disadvantaged to economically advantaged neighbourhoods, and many were racially and ethnically diverse.

Four recurring challenges to sustaining Play Streets were highlighted throughout the interviews: 1) securing and sustaining funding, 2) managing community and city resistance to street closures, 3) navigating government bureaucracy, and 4) retaining interest among organizers and volunteers. In each section, we describe how Play Streets organizers navigated those challenges.

3.1. Challenge 1: Securing and sustaining funding

Funding is often essential for aspects of Play Streets such as street closure permits, play equipment, and publicity. Funding can be in the form of in-kind donations (e.g., play equipment, food or water, volunteers). Some funds are required for every Play Street, while some spending (e.g., the purchase of equipment) may be higher upfront with less required in subsequent years.

Securing sustainable funding was the most common issue that was discussed in the interviews (9/22 cities). Funding organizations may

Table 2
Summary of n = 22 Play Streets programs.

City, State, (Population)*	Start Date and end date**	Overview of format	Funding
Bellflower, CA (79,190)	1995-ongoing	<ul style="list-style-type: none"> During the school year (late August until beginning of June), from 11 am-2 pm on Saturdays and Sundays. In the summer (mid-June to August), from 10 am to 1 pm, three days a week as well as at summer special events on Thursday and Friday nights 	<ul style="list-style-type: none"> City's general funds, it is in the budget that is approved by the City Council every two years. Don't solicit donations aside from a \$3,000 in-kind donation
Brooklyn, NY (2,736,074)	~2010-ongoing	<ul style="list-style-type: none"> Under the umbrella of Save Our Streets, and has been happening for about ten years Four block parties in the year, two each in Crown Heights and Bed-Stuy (one each at the beginning of the summer, one each at the end), from 1 pm to 5 pm 	<ul style="list-style-type: none"> Weekend Walks (NYC DOT) gives \$6,000 for each of the two sites, which is about a third of the funding; must apply annually. Donations from community partners (e.g., backpacks) <ul style="list-style-type: none"> Other funds: budget surpluses and anti-gun violence partners
Chicago, IL*** (2,746,388)	2012-ongoing	<ul style="list-style-type: none"> Chicago Dept of Public Health supports neighborhood organizations to run PS late May to September, sometimes October, each year. Mainly on weekends in the summer. Organizations receive funding to organize at least 5–6 Play Streets, of at least 3 h, (some organize upwards of ten) <ul style="list-style-type: none"> Started because of high obesity rates, to get parents and children more engaged, and to create a safe space for children because of high crime rates 	<ul style="list-style-type: none"> Initially funds were from Blue Cross Blue Shield to the Department of Health; then corporate funding; now it is a line item in annual Dept of Health budget Encourage in-kind donations, such as food from a local grocery store or some play equipment
East Harlem, NY (119,452)	2010–2014/2015	<ul style="list-style-type: none"> Called the Harvest Home Play Streets because it took place concurrently with the local farmers markets Farmers' markets took place once per week, and PS would happen as part of them. Happened from 10 am to 2 pm (the market itself was open from 8 am to 4 pm) 	<ul style="list-style-type: none"> Initial funding from organization that was funded through The New York City Department of Health Funded by an anonymous private foundation plus in-kind contributions, such as yoga classes

Table 2 (continued)

City, State, (Population)*	Start Date and end date**	Overview of format	Funding
Elizabeth, NJ (137,298)	2015-ongoing	<ul style="list-style-type: none"> Initial year had three Play Streets, which increased to 5 per year every year, occurs from April to October Often occurs on Saturdays from 10 am until about noon (ends earlier if things start to fade) Noted that some Play Streets may be inside 	<ul style="list-style-type: none"> The first year it was funded by Shaping New Jersey - donated money for the balls. Then, City Hall has a budget that pays for the balls for everyone City Council sponsors and donates a bike to each Play Street (the council member from that ward donates the bike), built into the budget The rest of the funding comes from Shaping Elizabeth (refreshments and a bike at each Play Street) and the YMCA Local supermarkets donate some fruit, community food bank donated water one year
Jackson Heights, NY (175,275)	2011–2018	<ul style="list-style-type: none"> Jackson Heights 78th Street Play Street, started the organization in 2010, began applying for block party permits in 2011, began with ten for Sundays throughout the summer. By the third summer was Saturdays and Sundays. Note* the street was rolled over into the DOT Public Plaza Program. Then in 2018 the "capital project" started and the street is a part of the park. 	<ul style="list-style-type: none"> Little to no budget initially; "very low cost effort." As effort expanded, also fundraised, sought philanthropic opportunities, City Council discretionary funding, and resources from partners with grants, as well as donations.
Long Beach, CA (466,742)	2018-ongoing	<ul style="list-style-type: none"> Implemented pilot Play Streets in four neighbourhoods (one in 2018, three in 2019), hoping to launch city-wide in 2020, 3 h in length 	<ul style="list-style-type: none"> "We Love Long Beach" pays for half of the city permit. Not funded—but looking for grants and opportunities, mainly funded through donations.
Los Angeles, CA (3,898,747)	2015–2018	<ul style="list-style-type: none"> Takes place roughly every 3 weeks in the summer but it is not consistent, last about 5 h. Would like to hold it twice a month but faced limitations in equipment and staffing. Communities apply to have a PS, and LA 	<ul style="list-style-type: none"> LA DOT pays for the permit, LA DOT found money to fund the pilots, and want them to fund the permanent program as part of the city budget. Have help from a local design firm to guide low-cost implementation

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Table 2 (continued)

City, State, (Population)*	Start Date and end date**	Overview of format	Funding
Milwaukee, WI (577,222)	2019-ongoing	<ul style="list-style-type: none"> DOT supplies the “box of play” is everything you need to run PS, with an emphasis on free play Happens three times in the summer: in July, August, and in conjunction with HarborFest (September), ran from 1 to 4 pm on Sundays 	<ul style="list-style-type: none"> Sponsored by local businesses and staff time via philanthropic support No local or county funds currently support PS, only in-kind donations
New Orleans, LA (383,997)	2013	<ul style="list-style-type: none"> Called it Play Streets, but wanted to call it Easy Streets Occurred once in October 2013 	<ul style="list-style-type: none"> Funded by Blue Cross Blue Shield of Louisiana, who initiated the process for Play Streets with the city, Community partners were in-kind donors, also collected donations
Novato, CA (53,225)	2015, 2017–2019	<ul style="list-style-type: none"> Called Sundays on Sherman First Play Street held in July 2015, and another took place in December, and then in 2017–2019 in July, September, and December, from 11 am to 3 pm. 	<ul style="list-style-type: none"> Described the budget as limited. A full-time special events coordinator is funded by taxpayer dollars Works with businesses to exchange promotion for sponsorship or a discount.
Philadelphia, PA (1,603,797)	1950 s-ongoing	<ul style="list-style-type: none"> Start in mid-June (17th-18th) and continue until Labor Day; Length up to the discretion of the organizer, but can block off one block of the street between 10 am and 4 pm, Monday through Friday The PS part of the meal program brings kids in who might not have come otherwise; almost 600 sites in Philadelphia get meals 	<ul style="list-style-type: none"> Grant funding through the U.S. Department of Agriculture for the meals programs, also relies on donations
Purcell, OK (6,651)	2019	<ul style="list-style-type: none"> June and July, took place in between the two local public school summer meal programs: breakfast from 7 to 9 am, Play street from 9 to 11 am, lunch from 11 am-1 pm 	<ul style="list-style-type: none"> Funded by the Tobacco Settlement Endowment Trust, which funds grants such as the Healthy Living Program, which pays for the materials and marketing for Play Streets, also accepts donations
Rochester, NY (211,328)	2016-ongoing	<ul style="list-style-type: none"> Initial year, pilot program, occurred end of August; each Play Street about 4 h, planned by local 	<ul style="list-style-type: none"> Primarily funded by a local foundation, provide resources for time, food, and

Table 2 (continued)

City, State, (Population)*	Start Date and end date**	Overview of format	Funding
San Carlos, CA (30,722)	Exact start date not specified -ongoing	<ul style="list-style-type: none"> residents; thus, frequency of PS varies by community Sheriff’s Activities League organizes the Play Street, which occurs once per summer, from 11 a.m. to 2p.m. 	<ul style="list-style-type: none"> equipment; the block party permit cost \$40. Parks and Recreation rents out the park for free; no other details provided
San Francisco, CA (873,965)	2016-ongoing	<ul style="list-style-type: none"> A smaller version of Sunday Streets: one to two blocks, put on by local residents and community groups; can have a pop up Play Street, lasts for 3–4 h. 	<ul style="list-style-type: none"> PS organizers pay a \$100 fee to Livable City for the help that they provide (such as getting them a permit and providing equipment); Livable City receives money from the city, sponsorship and partnerships, and then a fundraiser and some drives.
Santa Cruz, CA (62,956)	~2012-ongoing	<ul style="list-style-type: none"> Open Streets Santa Cruz County; two Play Streets per year, at two sites: Open Streets Watsonville in South County (in June, from 11 to 4) and Opportunity Santa Cruz in Westside Santa Cruz (in October, from 9 to 2); about five hours long 	<ul style="list-style-type: none"> Funds from the Santa Cruz County Regional Transportation Commission and the city of Santa Cruz; pay a city-approved organization to do the road closure (signage, no parking notification), also covers graphic design, promotion; also have gotten sponsors
Seattle, WA (737,015)	2014-ongoing	<ul style="list-style-type: none"> One permit can be for up to three days a week for six months. The maximum number of hours is 12 per week, and it must be during daytime hours. PS are organized by residents or organizations, who can choose what they would like to do within those parameters. 	<ul style="list-style-type: none"> Block party permits are free. Some money in the city budget is set aside to help underserved communities organize Play Streets; can also seek grant support from local agencies
Vineland, NJ (60,780)	2015-ongoing	<ul style="list-style-type: none"> Melville started in 2015, then Brichton in 2016, and Bylin in 2018; each county organizes their own Play Street; typically 10–2 in July and August 	<ul style="list-style-type: none"> Received \$5,000 from OJDDP (Office of Juvenile Justice and Delinquency) grant to locality for pop-up Play Street; funds used to buy equipment, pay police overtime, or purchase equipment. For the pop-up Play Streets all of the funds had to be requested by the county prosecutors

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Table 2 (continued)

City, State, (Population)*	Start Date and end date**	Overview of format	Funding
Wauwatosa, WI*** (48,387)	2018	<ul style="list-style-type: none"> Occurred once per week for two to three months, 9 am to 1 pm on Saturdays 	<ul style="list-style-type: none"> and that had to go through legislation, and it had to be approved. The city provided the barricades and signage, so there was no cost to the residents. Estimates that the sign cost \$30. *note ended because could not afford insurance to address liability concerns
Wilmington, DE (70,898)	2018-ongoing	<ul style="list-style-type: none"> Wilmington Parks and Recreation Play Streets; initiated by the Healthy Lifestyle and Chronic Disease Task Force to decrease obesity and violence; occurred during the week, evenings, 6–8:30 PM; including play and health screenings 	<ul style="list-style-type: none"> Funding comes from the Christiana Care Health System, which donates a \$35,000 grant. They write a proposal to them to get funding. The grant pays for the deejays, police overtime, t-shirts, equipment. Local parks and recreation department covers hourly rate for staff, also have some private funding and donations
Winona, MN (25,948)	2013-ongoing	<ul style="list-style-type: none"> Live Well Winona; occurs once per year, from 9 to 12 PM in the second week of April, close down four to six streets, coupled with health screenings 	<ul style="list-style-type: none"> Winona Health Hospital does a lot of the funding (through a title grant that they apply for), and provides the bouncy house. They have it built into their annual budget for the Healthy Kids Program.

*Data from U.S. Census, April 1, 2020, <https://www.census.gov/quickfacts/fact/table/US/PST045221>; Burrough level data for New York City: Brooklyn estimate (2020) from <https://www.brooklynpaper.com/brooklyns-population-2020-census-results/>, East Harlem estimate (2019) from <https://furmancenter.org/neighborhoods/view/east-harlem>, and Jackson Heights from <https://furmancenter.org/neighborhoods/view/jackson-heights>; **Ongoing as of the date of the interview in 2019; ***Interviewed two people from these localities.

decide not to continue after initial implementation year(s), or funding from a grant may end without new funding being secured. Sustainable funding can also be particularly challenging in the face of other community needs. The Play Streets organizer in East Harlem, NY (which began in 2010 and ended in 2014 or 2015), explained:

And because low-income communities face so many challenges that probably rank higher on the priority list... the challenge is, how do you gain support for that program? Which is kind of what happened to us... Despite my best efforts, I just couldn't sustain it because I couldn't garner the support. It wasn't as key. When people are dealing with homelessness and unemployment and hunger in the communities that we serve, Play Streets are way down on the priority [list].

In that context, competition between organizations for funding may be a challenge for Play Streets.

3.1.1. Navigating challenge 1

Organizers commonly suggested that the best way to sustain Play Streets is to have the costs incorporated into the jurisdiction's annual budget. When funding is built into the city budget, organizers can trust that they will be funded for the budget period, and it is more likely to be renewed. For example, Play Streets in Santa Cruz, CA is a part of the city's Vision Zero annual budget, which is a transportation safety initiative. Alternatively, cities such as Seattle, WA have made the permits that are required for Play Streets (e.g., street closure or block party permit) free to the public.

Local non-governmental, non-profit hospitals in the U.S. can be a sustainable source of funding for programs such as Play Streets, as was the case in Winona, MN, and Wilmington, DE. These hospitals must demonstrate Community Benefit: that they serve those who cannot pay, and that they are responsive to community needs, particularly as they relate to inequities (Rozier, Goold, & Singh, 2019). Play Streets can be positioned as one such way that those hospitals benefit the communities that they serve.

To make a stronger case for Play Streets to funders, organizers should find ways to evaluate the programs and highlight the positive impacts that are found. For example, evaluating the programs in terms of their capacity to promote active play and social and community connectedness can identify aspects of the program that may be attractive to funders (Umstatted Meyer et al., 2020). For example, organizers can use the tools in the Play Streets Guidebook (Pollack Porter et al., 2019), which includes evaluation tools to measure the number and activity of attendees. Play Streets organizers can also partner with local universities to collect data on active play (using a tool such as SOPARC) and attendee satisfaction, which was the case for Play Streets in Chicago, IL, Rochester, NY, and Wilmington, DE. By collecting data on Play Streets using questionnaires filled out by attendees, by taking photos, or using testimonials from Play Streets attendees, organizers can illustrate the program's successes in a way that appeals to current or potential funders.

3.2. Challenge 2: Managing community and city resistance to street closures

Street closures typically require a city permit, which may or may not require support from the homes or businesses on that street. Organizers in 6 out of 22 Play Streets programs described challenges that arose from community and/or city resistance to the street closure. City resistance could be from city officials, police departments, or public works. For example, organizers in New Orleans, LA, and Rochester, NY both described hesitancy from their respective police departments to issuing a street closure permit.

Resistance to street closures on the part of city officials may be in anticipation of community resistance. People in the community may be frustrated about cars being towed or not having access to the street. For example, organizers in Bellflower, CA, found that residents were upset about street cleaning or garbage collection being impeded by the street closure. An organizer of the New Orleans, LA Play Streets described resistance from businesses:

We also got pushback in the community. We went door-to-door and talked to everybody ahead of time, and there were three businesses on the route that were really upset that we were doing it. They felt that most of their clients came by car, and that we were going to stop their clients from being able to reach them on that day.

Community members may be particularly frustrated by the street closure if they perceive Play Streets to be organized by outsiders. This was the case in both New Orleans, LA, and Jackson Heights, NY, where the organizers were primarily white, causing some pushback from

community members of colour.

3.2.1. Navigating challenge 2

To navigate street closure resistance from city officials, organizers suggested helping these officials understand the purpose of Play Streets from the beginning of the process, which could help officials feel like program partners and thus more likely to offer support. For instance, the police department who had initially rejected the Rochester, NY Play Streets permit ultimately approved it once they learned more about the program. An organizer explained a police officer's perspective on the benefits of Play Streets: "If you close down the street it closes off pathways for drug activity in [that neighbourhood]. You're closing the street and promoting fun things for the kids."

Similarly, some organizers found that explaining the purpose of Play Streets and assuaging the concerns of resistant community members helped them support the program. This was the case in Winona, MN, where some local businesses were initially resistant:

In the beginning, some of the storefront owners really weren't happy about it because we were shutting down the street and they thought it would impede their business. We turn it around and say, "But we're also bringing exposure to your business and bringing these families and their parents and the adults that come with them down..." So, it's just being able to educate in all aspects of the event. I think the other thing is keeping it positive. We've had some storefront owners that are kind of grumpy and don't want that going on, or there's litter...And it's like, no. We take care of all that. We clean it up before and we pick it up after.

As the above quote illustrates, hearing the objections of community members and working to address their concerns is an important part of getting buy-in.

Organizers in San Francisco, CA successfully worked with the city to stop towing cars, to avoid frustration from community members. Organizers can also arrange alternate parking for the day, or have police escorts for cars that need to be on the street, which was the case in Santa Cruz, CA. Organizers in numerous cities distributed flyers, or went door-to-door on a street, to ensure that people knew about the street closure.

If street closures for Play Streets are not possible, organizers in urban areas can consider using a parking lot, park, or other publicly accessible space. This has been a useful workaround for organizers in rural areas, where shutting down a street for Play Streets is not always possible (Umstaddt Meyer et al., 2019b).

Finally, Play Streets organizers should involve community members in the process so that the program is reflective of community needs and values. For instance, organizers in Long Beach, CA, work with and support community members, who are put in charge of implementing Play Streets. Organizers in Milwaukee, WI, worked with a neighbourhood advisory committee to involve the community and local businesses to plan and recruit volunteers. An organizer in Jackson Heights, NY, emphasized the importance of generating community support by ensuring as much as possible that those organizing are demographically like the community.

3.3. Challenge 3: Navigating government bureaucracy

An additional barrier to Play Streets mentioned by organizers in 7 out of 22 communities was navigating government bureaucracy. In addition to the difficulty of acquiring the city permit to close the street, organizers must often coordinate with multiple city services, such as the department of transportation and the department of sanitation. Organizers in Brooklyn, NY, described this challenge:

When we have a block party Department of Sanitation is supposed to come pick up our garbage. They never have, so we have to pay for a private hauler. The bus routes are supposed to be re-routed, they've never been, and it's sort of like well you're responsible for liaising between all

these city agencies, but I don't know anyone— when I call I can't get to the right person.

As this quote illustrates, navigating government bureaucracy can require significant cultural, economic, and social capital, which can be a significant barrier.

3.3.1. Navigating challenge 3

The most common suggestion to facilitate working with the local government was to put the jurisdiction in charge of implementing the Play Street. For instance, in Rochester, NY, the city took over Play Streets after it had been organized by a private organization. This allowed for internal access to permits and a more streamlined coordination of different city departments. Organizers also suggested the jurisdiction develop a separate permit structure for the street closure, so it is easier to navigate, cheaper, and more likely to be approved.

When Play Streets are organized by community members, an organization/program to support them in navigating government bureaucracy can make the process more inclusive. For example, in San Francisco, CA, organizers pay a nominal fee to Livable City (an organization focused on improving public transit and safe streets, amongst other goals) for equipment and the permit. Both the Play Streets in Philadelphia, PA, and Rochester, NY, receive help with permits and coordinating city services from city staff. A Philadelphia Playstreets organizer explained:

We hire staff that have to go out and check and make sure [the community volunteers] are following the rules and regulations of the program, pick up and drop off paperwork for them, coordinate the delivery with the vendor. So, there's a lot of administrative work that goes into that, and their salaries are also funded by any money we have.

Thus, the city government or private organizations can provide support to community organizers so that they can overcome bureaucratic barriers.

3.4. Challenge 4: Retaining interest amongst organizers and volunteers

A final barrier to sustaining Play Streets, mentioned by organizers in 8 out of 22 communities, is the challenge of maintaining interest among organizers and volunteers. Key champions in city government, local organizations, or in the community are often relied on to make Play Streets happen. If those key champions lose interest, experience burnout, move away, or change jobs, it can be difficult to sustain Play Streets.

For example, the Wauwatosa, WI Play Streets program (which took place every weekend for three months in 2018) was discontinued after the sole organizer burnt out. An interviewee in Philadelphia, PA, where the city coordinates neighbourhood representatives who organize their own Playstreets, explained a similar problem:

If somebody moves, somebody who was supervising a [Playstreets] block moved or died or just said, 'I don't want to do it anymore' and nobody else picks it up, then that Playstreet wouldn't operate. And we have seen a decline in Playstreets over the last couple years.

With regards to city governments or local organizations, Play Streets in both New Orleans, LA, and Novato, CA, had trouble continuing after key champions left their positions in organizations that had participated in Play Streets.

3.4.1. Navigating challenge 4

Ideally, to illustrate appreciation for their commitment, organizers could pay the community partners and volunteers. This suggestion was put forward by organizers in Rochester, NY:

And we always say that you need residents who are super passionate about [Play Streets] to help push it through. But more often than not, our resident volunteer crew gets overburdened with requests for things to do in

the community. And so, for us to be able to pay for the resident champions who are leading this, to pay for the youth who are volunteering for this, was huge. And it wasn't a large amount of money. But it really showed that they are part of this process with us.

In addition to paying local organizers and volunteers, some organizers suggested getting salaried employees to run Play Streets so that the responsibility to organize remains even if a person in that position does not. In instances where this funding is not possible, other ways to prevent organizers and volunteers from feeling overburdened could be drawn upon, such as delegating tasks to subcommittees, or limiting the number or size of Play Streets that are being organized. Succession planning can also ensure continuity as organizers depart (Frost & Laing, 2015).

4. Discussion

Research by existing Play Streets programs suggest that they may strengthen community relationships, increase social interactions and connections between youth and adults, and increase the perceived safety of a community (Bridges et al., 2020; Umstaddt Meyer et al., 2019a). In particular, Chicago PlayStreets (ongoing since 2012) has documented benefits on the community such as opportunities to access community resources and to engage in active play (Pollack Porter & Umstaddt Meyer, 2019). While there could be benefits to singular Play Streets, a greater number of children are likely to access the program and develop a lifestyle involving regular PA, if Play Streets occur multiple times throughout the year, over many years.

This research identified several considerations regarding sustainability of Play Streets.

Several organizers repeatedly mentioned the benefits of support from the city and the importance of funding. There are limited data documenting the costs of Play Streets. As Play Streets are implemented in the future, it would be beneficial to obtain data on the cost, which could support a social return on investment analysis to illuminate the various social and community benefits of investing in Play Streets (Drabo et al., 2021). These data could help garner support from policymakers and decision-makers to invest in Play Streets as a recurring program.

Our research illustrated that knowledge of city government is required to secure permits, funding, or government services that are needed for Play Streets programs. Play Streets implementers may benefit from reaching out to their local elected officials' office and/or neighbourhood association to obtain assistance navigating government bureaucracy.

Securing funding is both a challenge and a solution to many of the issues faced by organizers. While many interviewees expressed hope that the city would take on and fund Play Streets, funding and support from any source can help ease barriers. Jurisdictions may consider including support for Play Streets, which could be as little as the cost of equipment in the budget for parks and recreation. Play Streets could be coupled with community events like a Back to School Night, as has occurred in rural areas. Coupling of Play Streets with community events and entities including libraries can be an effective strategy, as many partners may already own much of the equipment necessary for a successful Play Streets (Lenstra et al., 2022).

One other potential way to increase support for Play Streets is community engagement so there is on-the-ground support for them. In Chicago, for example, community residents were supported to put on PlayStreets themselves (Pollack Porter et al., 2019). There are numerous resources online including a guide that can be downloaded on how to implement Play Streets in rural areas (Pollack Porter & Umstaddt Meyer, 2019), which can assist communities. Given the importance of community participation in Play Streets, ensuring that the community wants the program, and ideally will take ownership of it, is essential. The community readiness tool (Islam et al., 2018; Islam et al., 2019) can be drawn upon to assess a community's awareness of an issue within that

community (such as youth physical inactivity), and their sense of ownership for addressing that issue, can be beneficial here.

This study has some limitations. First, the results are based on 24 interviews with Play Streets organizers from 22 distinct programs, located via a non-representative recruitment approach. As such, their experiences may not be representative of all Play Streets organizers. However, given the gap in the literature regarding Play Streets implementation, we believe the voices of these organizers offer a great deal to future Play Streets efforts. Second, this study involved asking organizers about Play Streets that were either current or occurred in the past. Some of the interviewees were unable to recall specific details related to implementation for and no records were available for validation; therefore, this study may be limited by recall bias.

Overall, this research identified critical elements that can help sustain Play Streets. By providing regular opportunities for people to be active in their own communities, Play Streets programs facilitate the opportunity for children and adults to build and maintain a healthy, active lifestyle.

CRedit authorship contribution statement

Katelyn Esmonde: Data curation, Formal analysis, Writing – original draft, Writing – review & editing. **Keshia M. Pollack Porter:** Conceptualization, Funding acquisition, Writing – original draft, Writing – review & editing. **Patricia Mahoney:** Investigation, Writing – review & editing. **Tyler Prochnow:** Investigation, Writing – review & editing. **Christina N. Bridges Hamilton:** Investigation, Writing – review & editing. **M. Renee Umstaddt Meyer:** Conceptualization, Writing – review & editing.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

References

- Aarts, M.J., Wendel-Vos, W., van Oers, H.A., Van de Goor, I.A., Schuit, A.J., 2010. Environmental determinants of outdoor play in children: a large-scale cross-sectional study. *Am. J. Prev. Med.* 39 (3), 212–219.
- Branscum, P., Bhoohibhoya, A., 2016. Exploring gender differences in predicting physical activity among elementary aged children: an application of the integrated behavioral model. *Am. J. Health Educ.* 47 (4), 234–242.
- Bridges, C.N., Prochnow, T.M., Wilkins, E.C., Pollack Porter, K.M., Umstaddt Meyer, M.R., 2020. Examining the implementation of Play Streets: a systematic review of the grey literature. *J. Public Health Manage. Pract.* 26 (3), E1–E10.
- The Child & Adolescent Health Measurement Initiative (CAHMI). 2016. National survey of children's health. Data Resource Center for Child and Adolescent Health.
- Drabo, E.F., Eckel, G., Ross, S.L., Brozic, M., Carlton, C.G., Warren, T.Y., Kleb, G., Laird, A., Pollack Porter, P.K., Pollack, C.E., 2021. A social-return-on-investment analysis of Bon Secours Hospital's 'Housing For Health' affordable housing program. *Health Aff.* 40 (3), 513–520. <https://doi.org/10.1377/hlthaff.2020.00998>. PMID: 33646873.
- Esmonde, K., Pollack Porter, K., 2020. Distance learning makes it harder for kids to exercise, especially in low-income communities. Retrieved from The Conversation U. S. <https://theconversation.com/distance-learning-makes-it-harder-for-kids-to-exercise-especially-in-low-income-communities-146522>.
- Frost, W., Laing, J., 2015. Avoiding burnout: the succession planning, governance and resourcing of rural tourism festivals. *J. Sustain. Tour.* 23 (8–9), 1298–1317.
- Guthold, R., Stevens, G.A., Riley, L.M., Bull, F.C., 2020. Global trends in insufficient physical activity among adolescents: a pooled analysis of 298 population-based surveys with 1.6 million participants. *Lancet Child Adolescent Health* 4 (1), 23–35.
- Handy, S.L., Boarnet, M.G., Ewing, R., Killingsworth, R.E., 2002. How the built environment affects physical activity: views from urban planning. *Am. J. Prev. Med.* 23 (2), 64–73.
- Honey-Rosés, J., Anguelovski, I., Chireh, V.K., Daher, C., Konijnendijk van den Bosch, C., Litt, J.S., Mawani, V., McCall, M.K., Orellana, A., Oscilowicz, E., Sánchez, U., Senbel, M., Tan, X., Villagomez, E., Zapata, O., Nieuwenhuijsen, M.J., 2020. The impact of COVID-19 on public space: an early review of the emerging questions—design, perceptions and inequities. *Cities Health* 5 (sup1), S263–S279.
- Islam, S., Small, N., Bryant, M., Yang, T., de Chavez, A.C., Saville, F., Dickerson, J., 2018. Addressing obesity in Roma communities: a community readiness approach. *Int. J. Hum. Rights Healthcare* 12 (2), 79–90.

- Islam, S., Small, N., Bryant, M., Bridges, S., Hancock, N., Dickerson, J., 2019. Assessing community readiness for early intervention programmes to promote social and emotional health in children. *Health Expect.* 22 (3), 575–584.
- Janssen, I., LeBlanc, A.G., 2010. Systematic review of the health benefits of physical activity and fitness in school-aged children and youth. *Int. J. Behav. Nutr. Phys. Activity* 7 (1), 1–16.
- Kuhlberg, J.A., Hipp, J.A., Eyler, A., Chang, G., 2014. Open streets initiatives in the United States: closed to traffic, open to physical activity. *J. Phys. Activity Health* 11 (8), 1468–1474.
- Lenstra, N., Slater, S., Pollack Porter, K.M., Umstaddt Meyer, M.R., 2022. Rural libraries as resources and partners for outside active Play Streets. *Health Promot. Pract.* <https://doi.org/10.1177/15248399211073602>.
- Moore, J.E., Mascarenhas, A., Bain, J., Straus, S.E., 2017. Developing a comprehensive definition of sustainability. *Implement. Sci.* 12 (1), 1–8.
- National Association of City Transportation Officials, 2020. Streets for pandemic response and recovery. Retrieved from https://nacto.org/wp-content/uploads/2020/07/NACTO_Streets-for-Pandemic-Response-and-Recovery_2020-07-15.pdf.
- Pollack Porter, K.M., Bridges Hamilton, C.N., Umstaddt Meyer, M.R., 2020. Implementing Play Streets in low-income rural communities in the United States. *Health Promot. Pract.* <https://doi.org/10.1177/1524839920957228>.
- Pollack Porter, K.M., Umstaddt Meyer, M.R. 2019. Implementing Play Streets in rural communities. Retrieved from www.baylor.edu/publichealth/ruralplaystreetsguide.
- Pollack Porter, K.M., Prochnow, T., Mahoney, P., Delgado, H., Bridges Hamilton, C.N., Wilkins, E., Umstaddt Meyer, M.R., 2019. Transforming city streets to promote physical activity and health equity. *Health Aff.* 38 (9), 1475–1483.
- Proctor, E., Silmere, H., Raghavan, R., Hovmand, P., Aarons, G., Bunger, A., Griffey, R., Hensley, M., 2011. Outcomes for implementation research: Conceptual distinctions, measurement challenges, and research agenda. *Adm. Policy Ment. Health Ment. Health Services Res.* 38 (2), 65–76.
- Rozier, M., Goold, S., Singh, S., 2019. How should nonprofit hospitals' community benefit be more responsive to health disparities? *AMA J. Ethics* 21 (3), 273–280.
- Stemler, S., 2000. An overview of content analysis. *Pract. Assess. Res. Eval.* 7 (1) <https://doi.org/10.7275/z6fm-2e34>.
- Umstaddt Meyer, M.R., Bridges Hamilton, C.N., Schmid, T.L., Hecht, A.A., Pollack Porter, K.M., 2019a. Systematic review of how Play Streets impact opportunities for active play, physical activity, neighborhoods, and communities. *BMC Public Health* 19, 335.
- Umstaddt Meyer, M.R., Bridges Hamilton, C.N., Prochnow, T., McClendon, M.E., Arnold, K.T., Wilkins, E., Benavidez, G., Williams, T.D., Abildso, C.G., Pollack Porter, K.M., 2019b. Come together, play, be active: Physical activity engagement of school-age children at Play Streets in four diverse rural communities in the US. *Prev. Med.* 129, 1–9.
- Umstaddt Meyer, M.R., Prochnow, T., Bridges Hamilton, C.N., Carlton, T., Wilkins, E., Arnold, K.T., McClendon, M.E., McKenzie, T., Pollack Porter, K.M., 2020. Assessing physical activity in temporary spaces: application of SOPARC/iSOPARC® for Play Streets. *Res. Q. Exerc. Sport* 91 (2), 346–353.
- Veitch, J., Bagley, S., Ball, K., Salmon, J., 2006. Where do children usually play? A qualitative study of parents' perceptions of influences on children's active free-play. *Health Place* 12 (4), 383–393.
- Xu, Y., Wang, F., 2015. Built environment and obesity by urbanicity in the U.S. *Health Place* 34, 19–29.