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Harnessing the Power of Open Data for Children and Families

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Child advocacy organizations, such as members of the KIDS COUNT network, have proven the value of using data to advocate for policies and programs to improve the lives of children and families. These organizations use data to educate policymakers and the public about how children are faring in their communities. They understand the importance of high-quality information for policy and decisionmaking. And in the past decade, many state governments have embraced the open data movement. Their data portals promote government transparency and increase data access for a wide range of users inside and outside government.

At the request of the Annie E. Casey Foundation, which funds the KIDS COUNT network, the authors conducted research to explore how these state data efforts could bring greater benefits to local communities. Interviews with child advocates and open data providers confirmed the opportunity for child advocacy organizations and state governments to leverage open data to improve the lives of children and families. But accomplishing this goal will require new practices on both sides.

This brief first describes the current state of practice for child advocates using data and for state governments publishing open data. It then provides suggestions for what it would take from both sides to increase the use of open data to improve the lives of children and families. Child and family advocates will find five action steps in section 2. These steps encourage them to assess their data needs, build relationships with state data managers, and advocate for new data and preservation of existing data. State agency staff will find five action steps in section 3. These steps describe how staff can engage diverse stakeholders, including agency staff beyond typical "data people" and data users outside government. Although this brief focuses on state-level institutions, local advocates and governments will find these lessons relevant. In fact, many of the lessons and best practices are based on pioneering efforts at the local level.

Throughout all the sections, the brief provides examples and resources, with a full list of links in the endnotes. Two fact sheets, one for child advocates and one for state government agencies, summarize the steps presented in this brief and are available on the Urban Institute website.[1]

1. Current Practice

State Government Open Data

Open data are data that anyone can freely use, reuse, and redistribute. At least 15 states have documented open data policies.[2] These policies include details on what data should be public, how the data should be published, and how to implement the policy. Policies may also direct the managing agency to form an advisory group or to produce an annual report on progress.

State governments published data long before formal open data policies emerged. In the past, individual agencies, such as the California Department of Education, published their own data.[3] Agencies provided data in various formats, from PDF documents to Excel spreadsheets to interactive websites. Agency websites are still common, and their data published in machine-readable format (i.e., digital formats that a computer can process, such as spreadsheets or database files) exhibit the characteristics of open data.

Open data published by state governments via a "portal" are a more recent development. These portals are centralized websites that catalog datasets in a standard way, have machine-readable formats, and include data from multiple agencies. Every state now publishes data through an open data portal.[4] The person who oversees open data systems for state governments hold different positions in different states. As of July 2018, 18 states had chief data officers.[5] Other states may charge chief technology officers or other staff with managing open data portals.

Generally, the agencies determine what datasets to publish, but the open data manager may seek datasets that users requested or are of significant policy interest, such as those related to opioids. Some data about people that are legally public, such as property records or government staff salaries, may have individual's names, but most data are summarized at the state, county, or other summary level and do not reveal personally identifiable information, such as names or dates of birth.

State agencies collect data on many topics related to children and families that may be included in these portals (box 1). States may also publish data on budgets and spending on child and family programs on their portals.

BOX 1

Potential Topics for State Datasets on Children and Families

- Child care: Licenses, capacity, quality ratings, and inspections
- Child welfare: Child abuse and neglect cases, foster care, and adoptions
- Crime and justice: Juvenile arrests or juvenile detentions
- Education: School enrollment, student performance, school nutrition programs, attendance, and school discipline
- Health: Immunizations, maternal and infant health outcomes, and other health conditions
- Public assistance: Participation in programs, such as the Children's Health Insurance Program or the Supplemental Nutrition Assistance Program

In practice, the data related to children and included in the portals vary from state to state and are uneven among agencies within states. To learn more, we scanned 10 portals, covering different regions and population sizes. None of the websites we examined had a category for "children and families." However, many of the websites had categories for topics related to children and families. The most common included education (seven sites) and health (six sites). The most datasets on children and families related to schools (eight sites), child care (six sites), and child health (six sites). For example, both Georgia and California had data on infant health. Only a few states had data on child welfare (three sites) and foster care (two sites). A supplemental spreadsheet accompanying this brief lists open data websites from all states and information for specific states we scanned.[6]

Interviews confirmed that some leading states are advancing beyond publishing to boosting their internal capacity to use data. There are also focused external collaborations around data for specific issues. For example, the state of Connecticut sought to develop a plan to improve children's behavioral health services and systems following the 2012 Sandy Hook shooting. The state's chief data officer facilitated a Data Integration work group "to improve statewide data sharing through a user-driven process across child-serving sectors to drive planning, policy, budgeting and decisionmaking to transform local, regional, and statewide networks of care."[7] The work group's goal was to create an open, accessible, transparent, and publicly available data system. Members included residents who use the services, representatives from state agencies, nonprofit advocacy organizations, and service providers. The work group cataloged and tracked the publishing of three dozen datasets that shed light on the need and availability of services.

How Advocacy Organizations Acquire and Analyze Data

Child and family advocates such as those in the KIDS COUNT network understand the value of existing data and see gaps where new data could shed light on progress or challenges families face. In interviews, KIDS COUNT data analysts described how they access, analyze, and publish data for their products and communications.

BOX 2

What Is KIDS COUNT?

This brief is written for all child and family advocates, but our conclusions are drawn from interviews with the state-level organizations that are members of the Annie E. Casey Foundation's KIDS COUNT network.[a] KIDS COUNT is a national and state effort to track the status of children in the United States. By providing policymakers and advocates with benchmarks of child well-being, KIDS COUNT seeks to enrich local, state and national discussions concerning ways to build a better future for all children. The ultimate goal is to improve policies and programs to improve outcomes for children and their families.

[a] "KIDS COUNT Network," Annie E. Casey Foundation, accessed January 8, 2019, https://www.aecf.org/work/kids-count/kids-count-network/.

In particular, we learned what works for these groups in accessing government data and what they believe could be improved. KIDS COUNT analysts reported acquiring data using one of three methods. The first and most common method is through direct relationships with people inside state government. An advocate calls or emails his or her contact each year to request data, and the state government staff member delivers data back, via email or a digital file on a physical disk. The second method is to download data from state government agency websites (not government-wide open data portals).

An additional method, which the KIDS COUNT analysts we interviewed did not use, is to download data directly from the state open data portal. Organizations affiliated with KIDS COUNT are adept at software tools such as Excel and Tableau and have the technical skills to use the delimited formats in open data portals. Downloading data directly from portals could increase efficiency because they can access data when needed rather than solely relying on a government contact. The back-and-forth communication takes time, and contacts may have priorities other than filling external data requests.

Advocates mentioned several barriers that state data managers could help overcome. The first was a lack of awareness. Some advocates did not know that an open data portal existed with data they might need. One said she was surprised the state did not make a bigger effort to advertise and promote their portal. Second was the perceived limited offerings on the portal. One advocate said it would be great to download everything they need from the portal, as it would speed up their process, but the data they need are not available publicly. Third, advocates felt overwhelmed by the hundreds or thousands of files. The portal might have useful data, but to search or browse through all the entries would be time intensive.

2. Expanding Advocacy for Data: Steps for Child and Family Advocates

Advocates leverage data to understand the complex challenges facing children and families, monitor trends, and uncover emerging issues. Data may show, for example, the number of children and families receiving social services decreasing at the same time the poverty rate is rising. Advocacy organizations can dig into the data to understand why it is happening. Once their advocacy agenda is determined, these organizations need data to convince policymakers of the need for new policies, programs, and resources.

Although these groups already use data to fulfill their missions, greater access to data about their priority issues could enhance their efforts. Advocates should become champions in their communities to pressure governments to release the data they need. Expanded access to data will benefit the advocacy organizations and attract new allies to join the efforts for better policies and programs for families. Having more people and organizations with a stake in using the data also helps protect against threats to data access. Ultimately, broader and more informed advocacy will lead to better outcomes for children and families.

Child and family advocates can apply their persuasive skills and deep knowledge of child and family issues to advocate for data. The following are five steps they can take to expand their advocacy for data.

Step 1. Create a Data Wish List

Many child and family advocacy organizations, such as those that participate in the KIDS COUNT network, already prioritize data collection, analysis, and publication. But even the organizations with the greatest data capacity do not have everything. Creating a data wish list can ground any advocacy for new and expanded data in the field's information needs.

Your "wishes" should include data you think the government already collects—the lowest-hanging fruit—but can also include "long-shot" data the government may not currently collect but would be useful for your advocacy. If you have limited resources, it is best to concentrate your efforts on the easier wishes, as the latter will likely require more of your time.

First, think about questions you have about children and family issues that new data could help answer. If an organization's goal is to increase the number of kids in prekindergarten programs, consider what data would help make the case or help you understand the barriers to achieving that goal? Why are there barriers to accessing the data? Is it because you do not have a connection to someone in the state agency that collects them? Is it because the state agency does not collect them? Write down questions you would like to answer, and repeat this process for each data wish.

Next, look at the data you do have, and consider if more disaggregated or fine-grained data would answer questions the current data cannot. For example, do you have data on the number of children receiving food stamps? Could you better advocate for these children if the data were broken down by age, by race, or by county?

Another resource for creating a data wish list is your state's open data portal, where you can view data that are currently publicly available. Seeing data on the portal can spark an idea for your wish list that you would not have considered otherwise. Most likely, the portals will not have a section on children and families, so you will have to use search terms or start with the portal categories, such as health, education, or human services. For example, in New York, the "human services" section includes statistics on youth admitted to detention by county.

Step 2. Connect with State Data Managers

As noted above, child and family advocacy organizations are experienced at building relationships with public stakeholders. Their established relationships are often with government staff in specific agencies, such as Child and Family Services. These agency experts care about similar issues and are a great first stop for starting a discussion about your data needs. Your inquiry can encourage them to think more about opening up their data.

The people skills you already have can also help make new connections in technology departments. People managing the state's open data portal also can have the role of persuading and supporting agency staff to publish data on priority issues. Depending on how the state government is organized, the people managing the state's open data portal may be employed in the state information technology department or another administrative agency. For example, the manager of the Texas Open Data Portal is located in the Texas Department of Information Resources. In Virginia, the chief data officer position is organized under the Office of the Secretary of Administration, which oversees the state's technology agencies.

If you have never connected with an open data manager before, a good place to start is on the state's open data portal. Look for an About page, a Connect with Us link, or even a Meet the Data Manager section. If none of those are available, there is usually at least a contact form or nonpersonal email address that you can use to ask for a specific name.

Start with an introductory email or phone call if you have never met the state data manager. Ask if he or she would be willing to spend time with you to get to know your organization and its data needs. State data managers are busy, but they care about their data users and want to help. You can learn about their process for selecting data to publish and any efforts to improve the portal's functionality or coverage. They may also refer you to the people within relevant agencies who determine what data to publish in their area.

In addition to asking for a meeting with the state data officer, ask if there are other ways to get involved. Some states have public meetings or advisory boards that give you an opportunity to make inroads with the state data manager and his or her staff. The state may also organize special commissions or work groups to improve data in specific areas. For example, a staff member from one

KIDS COUNT organization participated in an advisory board to improve the quality and types of data available on child maltreatment.

Step 3. Advocate for New Data Releases

With the wish list in hand and connections with agency and state data managers, child and family advocates will be well positioned to advocate for new data releases. Your input will help state data managers plan for future releases, keeping child and family issues at the top of their minds. You can categorize the desired data on two aspects: importance to your priorities and ease of making those data accessible. You may need to enlist state staff help to determine the latter. The lowest-hanging fruit are data that agencies have already tabulated internally but not yet posted. This also includes data that agencies publish in PDF or through interactive tools that can be shared in a spreadsheet or other machine-readable format.

In the next level of ease of access are data that can be derived from existing records but need to be summarized to protect privacy. Sometimes, agencies collect such characteristics as address, race, or age but release files with little granular detail to keep personally identifiable information confidential. Agencies can often release more detailed data while protecting privacy but are more likely to explore how to do this appropriately if they have an explicit request for the information.

Finally, you may find some of the items you want are not collected. One KIDS COUNT analyst noted that the state's current data on the total number of slots that child care providers have is insufficient. They need the number of slots by age group to quantify the shortage in infant care that community stakeholders are reporting from their on-the-ground experience. In this case, you can begin to make the policy case for why the new information should be added to the data collection procedures. Another possible vehicle for collecting data on new topics are surveys. These could be federally conducted surveys, such as the Behavioral Risk Factor Surveillance System, or local ones, such as the California Health Interview Survey.

You should also talk to other like-minded child and family organizations to learn about their data needs and interests. Requests coming from multiple organizations will demonstrate demand relevant to pressing community issues and policy questions. Knowing there is a ready audience, state data managers can justify spending their limited time and resources to prioritize those data for publishing.

A comprehensive data inventory would speed up your research on what data are held across the state government. A data inventory documents all data collected by state agencies, both data that are public record and those with sensitive or private information. Conducting a data inventory requires considerable state resources, so having multiple child and family organizations call for an inventory builds the case for the investment's value. It also emphasizes to state agency staff the importance of including high-quality information about data sources on children and families. (See step 5 in the Steps for State Governments section for arguments for a data inventory with the state data manager's perspective in mind.)

Step 4. Push for Expanded Access to Currently Shared Data

Child and family organizations, such as members of the KIDS COUNT network, have access to valuable data about children and families. In many cases, KIDS COUNT staff created a system that works for them. They may have a relationship with someone in the government agency from whom they request specific data once or twice a year. This arrangement is effective, but it also means that data are restricted to those who developed relationships and know how to request them.

This informal process has downsides, both to child and family advocates and to state government staff. First, it is not efficient. Advocates must initiate a request for the data extraction, and the turnaround time depends on the state agency staff member's regularly scheduled workload. Second, staff turnover, both among advocacy staff and state agency staff, means that new relationships need to be rebuilt periodically. This can be problematic if the data sharing was through a verbal understanding rather than a written agreement between the advocacy organization and state agency.

One option is for child and family advocates to ask their state agency contacts to publish the customized data extract recurrently and automatically on the state open data portal. Ideally, advocacy staff would not need to make individual requests or wait for the request to be fulfilled. Integrating this into agency workflow could also help with staff planning and reduce bottlenecks that result when agencies receive special requests.

In some cases, advocates also reported getting data from agency websites or interactive tools. Encouraging the agencies to also register the data files with the state data portal is another way for users to find the data. The Texas Department of Family and Protective Services (DFPS) publishes their interactive DFPS Data Book with regularly updated data[8] and posts the individual files on the state's open data portal.[9]

Child and family advocacy organizations can also review whether they publish their own data following open data standards that make it easier to download and reuse. Some audiences will always need the narrative and curated data visualizations, whether online, in a report, or on presentation slides. But advocacy organizations can also publish supplemental files in Excel or other machine-readable format for others to reuse, interpret, and share with new audiences. Organizations can apply an open data license specifying attribution and restricting commercial use if they wish.

Benefits from wider access to data extend beyond the data provider and advocacy organizations. Publishing data on children and families on open data portals elevates the profile of their issues alongside other civic topics and makes the data available to more users, including like-minded service providers and advocacy organizations. It could also lead to new allies in nontraditional partners, such as civic technology groups. These groups use data in new and innovative ways to highlight new insights and reach audiences less familiar with child and family issues. The National Conference on Citizenship published a helpful toolkit, titled *The Civic Tech Initiatives: Tools and Learnings from a Civic Data Challenge Case Study*, which offers principles and examples for working with civic technologists (NCOC 2016). Broadening the user base for the data has the added benefit of building a constituency that can lobby for continued access and publishing.

Step 5. Identify and Respond to Threats to Data Access

The previous steps are actions for opening up new data or expanding existing data, but preserving existing data is equally important. Even as new data are released, advocates will not want to take one step backward for every two steps forward. Data availability cannot be taken for granted.

Data come under attack for various reasons. One reason is lack of government resources. State governments have limited budgets, and cuts to data collection or distribution are areas where state agencies can cut costs in ways they perceive has little impact on residents. In this case, having a large and engaged user base is important to mobilize and voice the importance of the information that would be lost if the data were no longer available.

Another reason that data come under attack is because of perceived concerns about privacy, especially for children and other vulnerable groups. Agencies should pay close attention to legitimate concerns, but privacy may also be used as a blanket excuse to not release data. Advocates can alleviate these concerns by showing how they use the data to benefit agencies and the public. It is also important to explain that publicly released data should never include personally identifiable information and would not be released in cases, such as with small geographies or groups, when someone could be identified. Advocates can use their authority and credibility to make the case that data can be released responsibly to inform public issues and protect people's identities.

3. Opening Data for Child Well-Being: Steps for State Governments

In the past, open data advocates focused on the need for public information to promote government transparency and accountability. The field has matured to recognize the power of open data to advance agency missions, improve programs and services, and make life better for residents. Open data managers and agency staff can accelerate the use of data to improve children and family well-being in their state by working with stakeholders to show real-world applications of data.

Step 1. Engage with State Child and Family Agency Staff

Open data managers may be siloed in an information technology department and have primary contacts with data people within agencies, such as database administrators or data analysts. These staff should be included conversations about open data, but they should not be the only people at the table. Open data efforts should go beyond the typical data person to engage policy and program staff with subject-matter expertise.

Programmatic staff who already interact with child and family advocates are a great source of intelligence. Accessing data through these relationships is a common practice for KIDS COUNT advocates. Ask the staff what kind of data requests about child and family issues they receive from outside the government, formally or informally. These requests provide perfect candidates for regular submissions to the open data portal. Programmatic staff will have a sense of what questions these groups want to answer and emerging issues for children and families. Exposing these data through the portal enables more users to find and download the data, which will demonstrate a higher value for the agencies' efforts. Staff also might be more interested in contributing to open data if they can see tangible use cases rather than feel that it is just for compliance.

Other government staff are primary users of open data, so you should also explore the need for data internally. Ask program analysts, case workers, and anyone in the field questions such as which data they use in their daily work and if there are data that they do not have that would make their tasks easier or more efficient.

Step 2. Promote Open Data to Improve Child and Family Well-Being

The value of open data depends on how well it reaches audiences who can use the information. Many advocates are unaware of open data portals, so spreading the word about open data and the tools used to access open data is important. State governments do not need to spend a fortune on advertising. A few low-cost approaches can spread the word.

Low-cost electronic promotion includes blog posts and social media. Agencies can include information about open data in their own newsletters or have announcements published in other government agencies' newsletters. If the chief data officer works in a technology agency, promoting the portal only through that agency will reach a limited and niche audience. Chief data officers should also reach out to education or human services agencies to include information about open data specific to the audiences who care about the content.

Step 3. Learn about the Needs of Users Interested in Child and Family Issues

For deeper engagement, you will need to move beyond one-way promotion to more active outreach. Users interested in child and family issues include advocates, service providers, educators, parents, and child-related agencies in city and county governments. These are not developers or data people who typically are considered the audience for open data. For those who do not consider themselves data people, asking such questions as "What data do you want?" may not yield helpful responses. Instead, try such prompts as "What questions do you want to answer?" or "What are the pressing issues on your organization's agenda?" People who are uncomfortable or intimidated by data will have priority concerns and questions they would like to answer.

The Sunlight Foundation's Guide to Tactical Data Engagement has a four-step approach to help cities facilitate the use of open data to improve communities, which starts with the "find" stage of listening to community demand for information.[10] One way to meet users interested in child and family data informally is to attend conferences or meetings where they are already gathered. Hosting or partnering on in-person events focused on open data can also promote data. For example, Colorado's state data officer presented to nonprofits, local agencies, and academics at the "Mile High Data Day" in Denver. These include basic trainings for less technical users to "hackathons" or similar events for advanced users. Giving people a chance to use the data and share their findings leverages the event to a bigger audience. It could also include long-term engagements with data user groups around specific topics.[11] The Western Pennsylvania Regional Data Center pioneered this approach for property, transportation, and environmental justice data, but it could be applied to other topics.

The second step recommended by the Sunlight Foundation's guide is to refine your audiences. One tactic for thinking about users' needs is to develop "user personas" that describe the data interests and needs for typical users. For example, a parent advocating for investments in the local elementary school will need different data, and perhaps in different formats, than a staff member at an advocacy organization focused on reducing child homelessness. Once you understand the ways different groups find and use information, state staff can develop specific strategies catered to each persona. To get started, state agencies can review the user persona section in the guide[12] and check out the library of user personas for open data drawn from various government and nonprofit agencies.[13]

Step 4. Enhance the Data and Portal to Meet the Needs of Child and Family Advocates

The final two steps in the Sunlight Foundation's Guide to Tactical Data Engagement are the "design" and "implement" phases. After developing personas and thinking about potential users, states will be well prepared to consider users interested in child and family issues as they improve their open data program. From the engagement in the step above, you will learn about priority topics for child and family advocates and connect them with agency owners to improve related data offerings. You should also review the portal design and structure. Many open data portals allow users to find data by searching for keywords or by browsing in categories. It is important to name datasets in a way so that someone searching for data can find them. Consider synonyms or other phrases used to describe data and include those words in descriptions or keyword tags. Custom queries of the portal can also help advocates navigate the site. The Connecticut Open Data portal includes a query of data relevant to "substance use and prevention and treatment data" so people interested in this topic do not have to search through the 1,040 datasets.

Providing clear documentation will also help advocates use and promote the data. This starts with providing clear and thorough metadata for the individual files, explaining the meaning of the fields and any limitations. The Colorado Department of Health has published information sheets for each of the indicators included in its Health Indicators Warehouse, which includes sections on "what does the data tell us," the calculation of the indicator, the source data, any limitations, and staff contact information.[14]

Tailored guides help users navigate open data portals. Madison, Wisconsin, created a data toolkit for community organizations applying for a grant program to reduce youth violence (City of Madison 2018). This easy-to-read document walks readers through how to access data on community assets, neighborhood indicators, youth violence, education, and youth attitudes and provides contact information for each category. The Western Pennsylvania Regional Data Center created a generalized outline for its data guides, with examples such as its guide to "Crime, Courts, and Corrections."[15]

It is better to ask than to assume. To reach potential users, state governments can partner on such events as “data days” to invite users to share feedback. They can create an advisory board that convenes users to discuss current data challenges and successes. Roundtable discussions can serve a similar purpose but may meet less regularly. Many states are geographically spread out, and not all activities can happen in person. States can engage with users digitally by asking for feedback directly through open data portals or though social media or newsletters.

Step 5. Conduct and Publish a State Data Inventory

Child and family advocates have important questions that data could answer, but they do not know all the high-quality data that exist. The only way to solve the “do not know what you do not know” dilemma is to see a public inventory of government data. A data inventory benefits the government internally by facilitating sharing across agencies and is recommended by such groups as the Center for Government Excellence (GovEx) as a best practice. State agencies in Connecticut, including the departments of education, early childhood, and children and families, are completing their first inventory of datasets they consider to be of high value.

Ideally, state governments would conduct a comprehensive inventory of data from all government agencies. States have also conducted data inventories for particular issues, such as the North Carolina Environmental Public Health Data Inventory.[16] With the relationships built in step 2, a state could pilot a data inventory process with agencies providing child and family services or around a specific topic, such as child physical and mental health.

For states that have never conducted a data inventory, several resources are available to get started. The GovEx Labs Data Inventory Guide includes a step-by-step process for how to conduct the inventory, as well as case studies and examples from governments that have successfully done them.[17] City and county governments have proven themselves leaders in open data, and state governments can reach out to city or county open data managers who have conducted an inventory. In addition to identifying high-value datasets for child and family advocates, a data inventory will help states understand what information is available for internal use. Some state agencies may be better able to collaborate once they know what data other agencies collect. It may also reduce duplication of data collection.

4. Conclusion

Our research revealed the opportunities for advocates and state agencies to improve the lives of children and families through more extensive use of open data. From our interviews, we are confident that advocates and open data providers are well equipped to expand their relationships and raise the bar for access to timely and relevant data on issues related to child and family success. Peer networks such as KIDS COUNT can accelerate progress by sharing best practices and encouraging members to engage in the data. With more information more widely available, we can better understand how well children and families are faring and craft tailored solutions to help them thrive.

Notes

[1] See “Five Steps States Can Take to Advance Child Well-Being through Open Data” at https://urbn.is/2TbTM0o (Pettit and Pitingolo 2019a) and “Five Steps Child Advocates Can Take to Expand Access to State Data” at https://urbn.is/2sDhsPI (Pettit and Pitingolo 2019b).

[2] See “Tactical Data Engagement,” Sunlight Foundation, Roadmap to Informed Communities, accessed January 7, 2019, https://communities.sunlightfoundation.com/methodology/ and “Open Data Policy Collection: Policies by Place Name,” Sunlight Foundation, Open Data Policy Hub, accessed January 8, 2018, https://opendatapolicyhub.sunlightfoundation.com/collection/alpha/.

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