C5 Collaborative
Data Linkage Project
EXECUTIVE SUMMARY, JUNE 2020

Policy Wise
for Children & Families

the *Stollery*
charitable foundation

EDMONTON
COMMUNITY
FOUNDATION

C5

EMCN

Bent Arrow

Norwood
Child and Family Resource Centre

BOYLEstreet
COMMUNITY SERVICES

terra centre

Summary & Key Messages

The C5 Collaborative Data Linkage Project is an initiative between the agencies of the formal C5 collaborative, and PolicyWise for Children & Families (PolicyWise). Within the C5 collaborative are: Bent Arrow Traditional Healing Society (Bent Arrow), Boyle Street Community Services (Boyle Street), Edmonton Mennonite Centre for Newcomers (EMCN), Norwood Child & Family Resource Centre (Norwood) and Terra Centre (Terra). The collaborative works toward stronger outcomes for individuals, families, and communities, and aims to help shape policy, legislation and regulations to advocate for their clients' realities, hopes and dreams. PolicyWise and the C5 have been working together and developing new ways of knowing and working with data that serve communities and nonprofits.

Data can inform the work of the C5 at several levels: the program level, the agency level, and at the collaborative level. Agencies may collect data at the program level to report back to funders, to manage service delivery, to evaluate the effectiveness of programs, and to better understand the needs of their clients, and in turn improve, and expand programming. At the agency level, data may be used to make a case for funding and for decisions about services and resources. Across the collaborative, data may be particularly helpful for strategic considerations about the collaborative, and to influence policy makers and funders.

In this project, data in the form of anonymized client records and activities was shared with PolicyWise from a number of programs from each of the C5 agencies with the aim of integrating data from across the C5 collaborative. Linking data across agencies is a complex process and includes several steps. The first step is a thorough audit of the data and description of the quality of data collected by the organizations. Second, is an assessment of the legal and ethical requirements needed to integrate data, and; third, an exploration of the linkage of the same individuals across different agencies. In this last step, it is important that the data quality be high.

Activities throughout the project entailed:

| Identifying Priorities for Using Data | Examining Data Quality with a Data Audit | Reviewing Data Quality within Agencies | Exploring Data Stories | Engaging C5 Staff on Project Learnings |

» Assessing data quality
To understand and serve clients better, high quality data is key. Quality data means documenting missing data, having standard ways of collecting data, and robust demographics. Quality data allows higher-order analyses such as anonymous linkage and studying client journeys.

» Developing a data story
The power of data was explored to inform programs and practices within the C5 collaborative. Data can be beneficial and serve agencies in many ways – three cases were shown in this report: (a) using postal code and open-source data; (b) measuring and assessing an outcome such as parenting; and (c) linking and integrating data between agencies.

» Reflecting on data strengths and opportunities
The lessons learned, and strengths and opportunities learned throughout the project are summarized.

Project Approach

PolicyWise uses a collaborative approach to project delivery that is designed to: engage stakeholders in meaningful, participatory ways throughout projects; create opportunities for creative problem solving; improve the quality of, and access to, information; and, increase the likelihood that the knowledge generated will be applied to create impact for stakeholders. Knowledge mobilization strategies are embedded throughout our projects.

Key Activities

The C5 Collaborative Data Linkage Project took place between November 2018 and June 2020. A number of factors were integral to working together: the flexibility to adjust timelines, address the data-needs of the C5 agencies, learn how data is already used, and being mindful of the time required by agency staff.

Prioritizing activities focused on understanding what to ask of the data, which resulted in site visits, workshops, and in-depth conversations about each agency's data. Another set of activities focused on examining the quality of, and analyzing, the data. Knowledge sharing activities focused on reviewing and reflecting on the data to gain insights from the agencies, as well as producing a final report and facilitating a "Data Day" with staff from the C5 agencies.

Identify Priorities for using Data
November '18–August '19

Examine Data Quality
September–December '19

Review Data with Agencies
January–February '20

Produce Final Project Report
March–April '20

Hold C5 Data Day
June '20

Important considerations when creating a database to record clients and their activities:

Storing unique client IDs

» Each person gets one unique client ID. That ID must not be assigned to other clients!

» Client IDs must link to all other events (see below).

Storing event-based data

» Assign an ID to each event data point e.g., health clinic visit is Clinic Visits ID = 1

» Each event must have a date, with consistent formatting across all programs (e.g., dd/mm/yyyy).

» Link each date and event back to client ID.

Storing referral data

» Assign an ID to each unique referral type e.g., "Food Bank" gets an ID of 30.

» Store these IDs so that all staff can access them.

» Each referral must have a date.

» Link each referral back to client ID.

Finally, to ensure consistency in recording clients and their events, **only store open text data if absolutely necessary, such as for case notes. Otherwise, create pick lists or other forced choice fields.**

How the C5 agencies use data and how they want to use data

DATA USES	HOW DATA IS USED BY C5 AGENCIES	HOW DATA COULD BE USED
Legal Contract Funder Reports	» Reporting to funders	» To produce reports that go beyond what is asked, telling a more accurate story about the agency and how it serves a community
Recording Activities with Clients	» Following up with clients after their visits	» Centralizing intake forms » Extracting text-data from case notes to categorize clients' needs
Predicting Client Needs & Services	» Reviewing evaluations and using this information to apply for future services	» To know more specifically and predict: which services impact clients, how they impact clients, and who it impacts most
Measuring Outcomes and Impact	» Evaluation, funder-driven	» Evaluation, client- and issues-driven
Learning and Evaluating	» As part of performance appraisal of staff which are embedded in monthly supervision meetings	» Learning from implementation differences within programs (e.g., efforts to increase attendance, counting clients)
Improving Efficiencies, Services and Resources	» Program development	» To coordinate referrals within the C5 collaborative » Knowing where services overlap/do not overlap
Raising Funding & Revenue	» Promotion, marketing	» To engage with funders and donors in more specific data-driven asks and outcomes » To advocate for more capacity to "do data"
Strategy and Planning	» As part of understanding community connections and identifying where to nurture strategic partnerships » For mapping out where clients live to facilitate future program development	» Planning out services for clients based on need rather than a one size fits all approach » Further understanding how to help clients connect to their community
Influencing Policy makers, Funders and partners	» Applying for grants that serve needs that are common to the C5 agencies, such as the family and child services	» Applying for grants that serve data integration to argue for certain models of care; systematically documenting successes of the collaborative

Data orchard. (2019, September). Data maturity framework for the not-for-profit sector.
https://www.dataorchard.org.uk/what-is-data-maturity

Photo Credit: bentarrow.ca/

PolicyWise and the C5 agencies worked collaboratively on:

Assessing data quality:

The quality of data among the C5 collaborative was assessed for each agency. Specific areas for discussion by agencies and across the C5 include:

» How to collect demographic and intake client data

» How to collect data about referral processes

» How to manage data to count clients and record data about services

Developing a data story:

The power of data was explored to inform programs and practices within the C5 collaborative. Avenues for exploration illustrated include:

» Conceptualizing the purpose, uses, and benefits of data

» Using open-source data to complement geographic data

» Measuring and assessing an outcome such as "Parenting"

» Linking and integrating data between the C5 agencies

Reflecting on data strengths and opportunities:

The lessons learned, and strengths and opportunities learned throughout the project are summarized:

» Key lesson #1 – Data is community

» Key lesson #2 – Seek out your why?

» Key lesson #3 – Engage with data continuously

Conclusion and Future Directions

This collaborative data integration project yielded several important insights. There are many important lessons learned from this work to continue build on in the future. Four highlights:

» **High quality data is key:**

  » To link within and across agency data, key demographic variables to collect accurately and consistently are first and last name and date of birth.

  » It is better to document data as missing or unknown than to fill in a field with a system default or a "best guess".

  » To further understand and serve clients, working towards standardization in some parts of client intake and data harmonization would be beneficial.

  » To explore client journeys, a systematic, consistent, standardized way of capturing referrals, activities and dates is recommended.

» **Data can be beneficial and serve agencies in many ways** – three cases were shown in this report. It's worth considering how the data will be used and being intentional about what use/benefits are sought and working from there to align data collection, management, analysis and sharing activities.

» **Data do not live in a vacuum** but are part of the larger community in which they live. People and data culture shape the way data can be used and translated into stories.

» **Working with data leads to new and continuous insights**. As stated in the data-to-wisdom cycle, the process of working with data is iterative and every project yields new insights and things to do! Many strengths have been identified to build upon and several opportunities for greater impact also are described.

This report raises important questions concerning how to use data, monitoring the quality of data, and sharing data across the C5 collaborative.

Primary Contributors

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Project Funders

This project was made possible by generous support from the Stollery Charitable Foundation and the Don & Joan Stanley Family Fund at the Edmonton Community Foundation.

Acknowledgements

It is with thanks that we acknowledge the individuals who have contributed their wisdom, experience, and perspectives to this project. PolicyWise would like to thank the participating agencies *(Bent Arrow Traditional Healing Society, Boyle Street Community Services, Edmonton Mennonite Centre for Newcomers, Norwood Child and Family Resource Centre, Terra Centre)* and the C5 Hub.

PolicyWise would also like to express gratitude to the following staff for their data insights and going above and beyond their roles within their agencies to collaborate on this project: Keleigh Larson & Murray Knutson *(Bent Arrow Traditional Healing Society)*, David Woodruff *(Boyle Street Community Services)*, Kirsten Mah & Omar Rafique *(Edmonton Mennonite Centre for Newcomers)*, Jessy Gray *(Norwood Child and Family Resource Centre)*, and Laura Fulmer & Sean Draper *(Terra Centre)*.