

Defining and Measuring Homeless Occasions using HMIS

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Collaboration Across
the Human Services Spectrum



Concept of “homeless occasion”

- The term “**occasion**” replaces the old term “episode.”
- A person’s homelessness history can be composed of **multiple** homeless occasions.
- A homeless occasion has **clear boundaries** that separate it from other occasions.



Goals of this presentation

- Demonstrate how **HMIS data** can be used to figure out approximately when “occasions” begin and end.
- Describe how this would be **useful**.
- Show the results of **Georgia** analysis of occasions.



Evaluating by hand

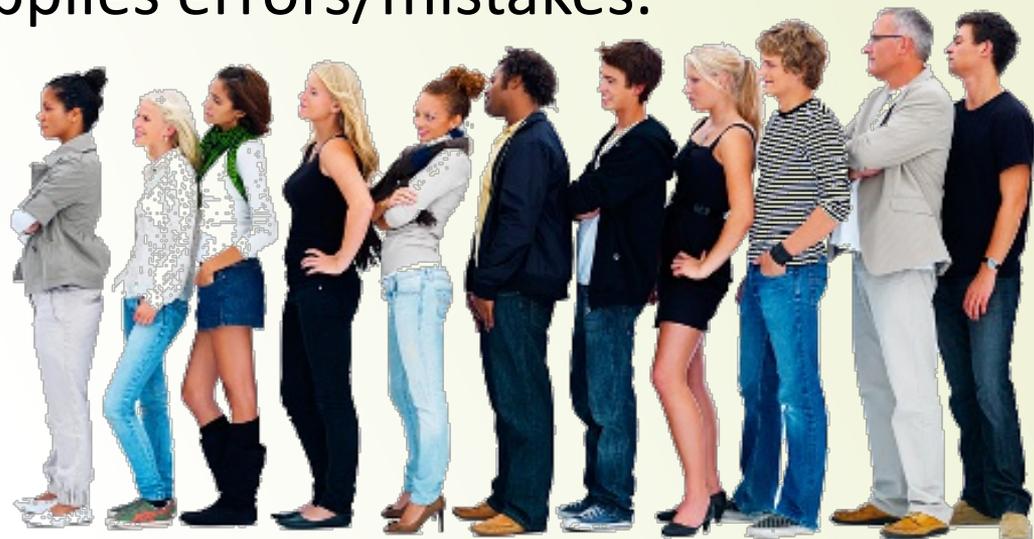
- ✓ The most accurate method for establishing the beginning and end of a person's homeless occasion.
- ✗ Consistency is not guaranteed.
- ✗ Time consuming! Doesn't work for large numbers of clients.





Evaluating by algorithm

- ✓ Is automated. Run the program over the weekend!
- ✓ Makes it possible to process hundreds, even thousands of clients.
- ✓ Is perfectly consistent.
- ✗ Loses some degree of nuance.
- ✗ Systematically applies errors/mistakes.





Algorithm?

- An algorithm is a step-by-step procedure for obtaining a desired result.



- Some HMIS “rules” need to be established that help us obtain a complete sketch of a homeless occasion.



When does an occasion begin?

- An occasion begins on Day 1 of a **literally homeless** experience.
 - But it is not simply the program entry date of the first homeless HMIS enrollment.
 - A better estimate of Day 1 considers “**prior night’s residence**” and the **length of stay** in that residence.



More on prior night's residence...

- “Prior night’s residence” is associated with a **length of stay**.
- HUD has specified choices:
 - < 1 week, 1 week – 1 month, 1 – 3 months, 3 months
 - 1 year, > 1 year
- Ranges introduce more **uncertainty** (more on this later)
- But they can tell you **approximately** when the prior homeless experience began.



More ideas for isolating the beginning

- Make sure data quality is not an issue
- Factor in data from outreach teams
 - Ensure that outreach teams are highly responsive and have good data quality.



Examples

John's first homeless HMIS enrollment...

<u>Program Entry</u>	<u>PNR</u>	<u>PNR Length</u>
8/8/13	Street	< 1 week

Homeless occasion began on 8/2/13



Examples

Tina's first homeless HMIS enrollment...

<u>Program Entry</u>	<u>PNR</u>	<u>PNR Length</u>
8/8/2013	Apt	N/A

Homeless occasion began on 8/8/2013



When does an occasion end?

- Occasion ends when...
 - Client (1) goes to a **permanent** housing destination AND (2) has no homeless experience for at least **30 days**.
 - The number of days is somewhat arbitrary.



When does an occasion end?

- Occasion ends when...
 - Client (1) goes to an **institutional** destination AND (2) stays out of HMIS for at least **90 days**.
 - Not stated by HUD in those terms, but can be deduced from the proposed chronic homelessness rule.



When does an occasion end?

- Occasion ends when...
 - Client (1) goes to a **temporary** housing destination AND (2) stays out of HMIS for at least **90 days**.
 - This is not mentioned by HUD, but is something I'm proposing.



When does an occasion end?

- Bad data completeness throws a kink into the procedure.
 - “Don’t know,” “refused,” “other,” or missing destinations might be **disguising the end** of an episode.
 - Good data completeness and data quality removes this concern.
 - But it is likely that a truly unknown destination **signals the continuance** of a homeless occasion, anyway.



Examples

John's program exit...

<u>Exit Date</u>	<u>Next Entry</u>	<u>Next PNR, LOS</u>
9/1/13	10/2/13	Street, < 1 week

Next homeless date: 9/25/13

Days until next homeless: 24

Conclusion: Occasion did **not** end, regardless of the type of destination



Examples

Tina's program exit...

<u>Exit Date</u>	<u>Next Entry</u>	<u>Next PNR + LOS</u>
9/1/13	10/2/13	Apt with friends, N/A

Next homeless date: 10/2/13

Days until next homeless: 31

Conclusion: If the exit destination was “permanent” the occasion ends and 10/2/13 is the **begin date** of a new occasion. If the exit destination was **not** permanent, the occasion simply continues.



Result: Occasion duration

- Once the beginning date and end date of a homeless occasion have been established, simply subtract the former from the latter to obtain the **occasion duration**.



Result: Number of occasions

- Once a procedure has been established for determining when an occasion ends, the number of occasions can be easily counted.
- Simply add them up for each client!



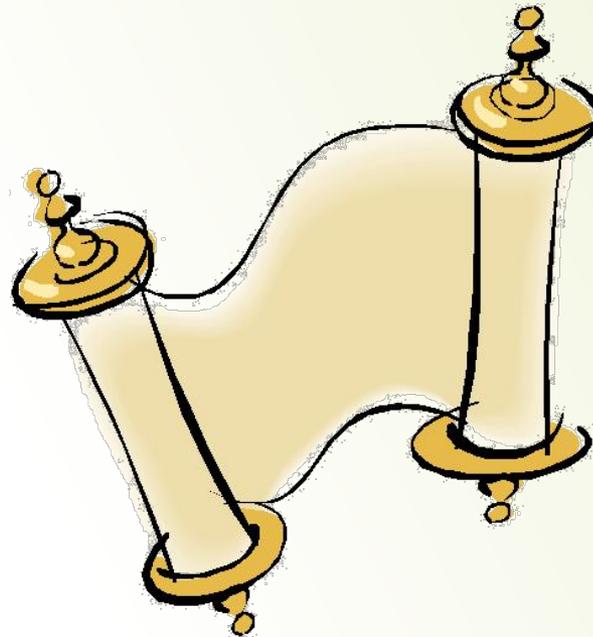
Result: Chronic status

- All you need to determine someone's chronic homelessness status are his occasion lengths and occasion frequency over the most recent 3-year period, plus disabling condition status.
- Proposed HUD rule:
 - Has disabling condition AND...
 - At least **1 occasion** in the **past 3 years** lasted more than **1 year**; OR
 - At least **4 occasions** occurred in the last **3 years**, with the **cumulative length** of the 4+ occasions being at least **1 year**.



Result: A concise client history

- An algorithm like this can be used to provide a useful summary of an individual client's homelessness history.





Result: A concise client history

3-Year Enrollment History for Client A (Chronically Homeless under HUD Proposed Rule)

Agency Name	Prior Night's Residence / Length of Stay	Disabling Condition at Entry	Program Entry Date	Program Exit Date	Destination at Program Exit	Days until Next Homeless	Occasion Status at Exit	Occasion Length at Entry	"Chronic" at Entry
Salvation Army	Emergency shelter / 1 – 3 months	No	6/24/2011	7/22/2011	Staying with friends, temporary tenure	206	END	30	No
Transition House	Transitional housing / 1 week – 1 month	YES	3/14/2012	3/21/2012	Place not meant for human habitation	N/A	Continue	7	No
Transition House	N/A	YES	5/30/2012	6/19/2012	Place not meant for human habitation	N/A	Continue	84	No
Gateway Center	N/A	No	3/11/2013	3/13/2013	Place not meant for human habitation	N/A	Continue	369	No
Quest CDO	N/A	YES	6/26/2013					476	YES

Notes:

- The last enrollment listed is the “current” enrollment.
- Occasion lengths are cumulative



Data is needed

- For most, a **data export** is needed.
- This could be **massive**, depending on the number of clients and program enrollments.
- Is chronic homelessness assessment the goal?
If so: For any given client, the export needs to include program enrollments occurring **3 years prior** to the program enrollment being assessed.



Data is needed

- Open Database Connectivity (**ODBC**) is my preferred way to obtain data.
- ODBC establishes a **direct connection** from my computer to Georgia's HMIS database.
- This means I am **not dependent** on my vendor providing me an export.
- I can retrieve data **iteratively** – rapidly and in tiny amounts.



Software is needed

- There is free statistical/programming software available.
- Requires some programming knowledge.
- Programmer can refer to the flow chart I handed out and make adjustments as needed.



Georgia





Parameters

- **Who:** Heads of hh entering ES, TH, or RRH programs during the first half of 2013.
- **What:** Each head of hh's *most recent* program enrollment
- **Where:** All over Georgia
- **How many:** 9,927 unique heads of hh
- **Historical data:** Exactly 3 years of historical HMIS records were drawn for each head of hh



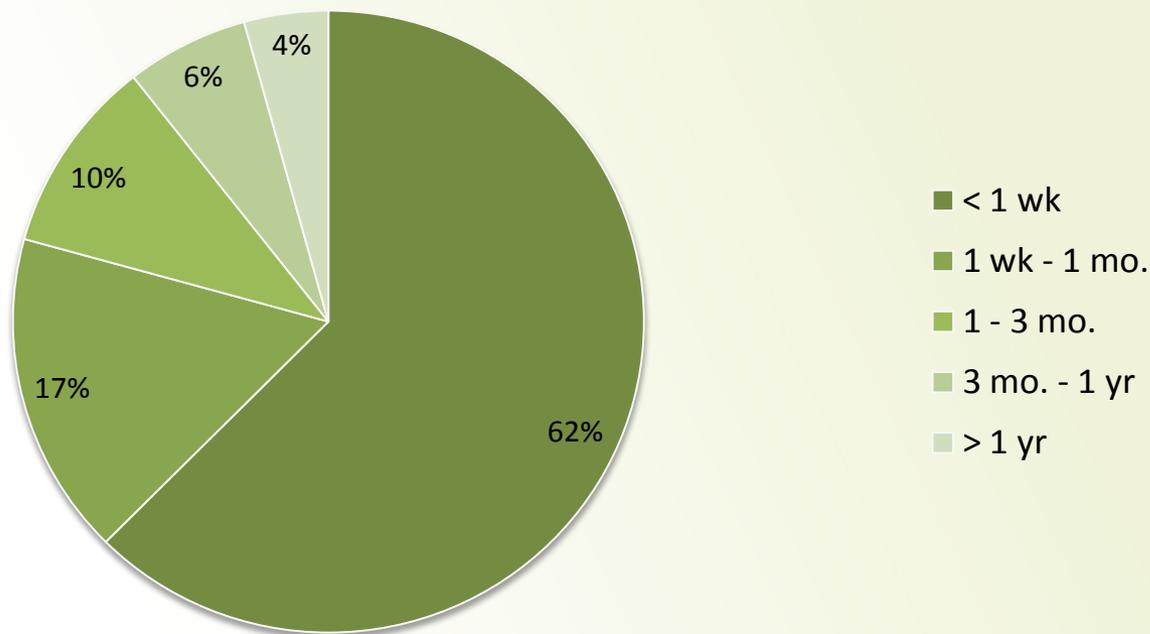
Data quality: Prior night's residence

- ✓ Unknown prior night's residence: **3.8%**
- ✓ Among heads of hh w/ *homeless* prior night's residence, unknown length of stay: **1.5%**



Data quality: Prior night's residence

Length of Stay in Residence prior to Occasion's First
HMIS Enrollment





Data quality: Other elements

- x Unknown destination: 43.0% of all relevant destinations.
- ✓ Unknown disabling condition status: **0.2%**



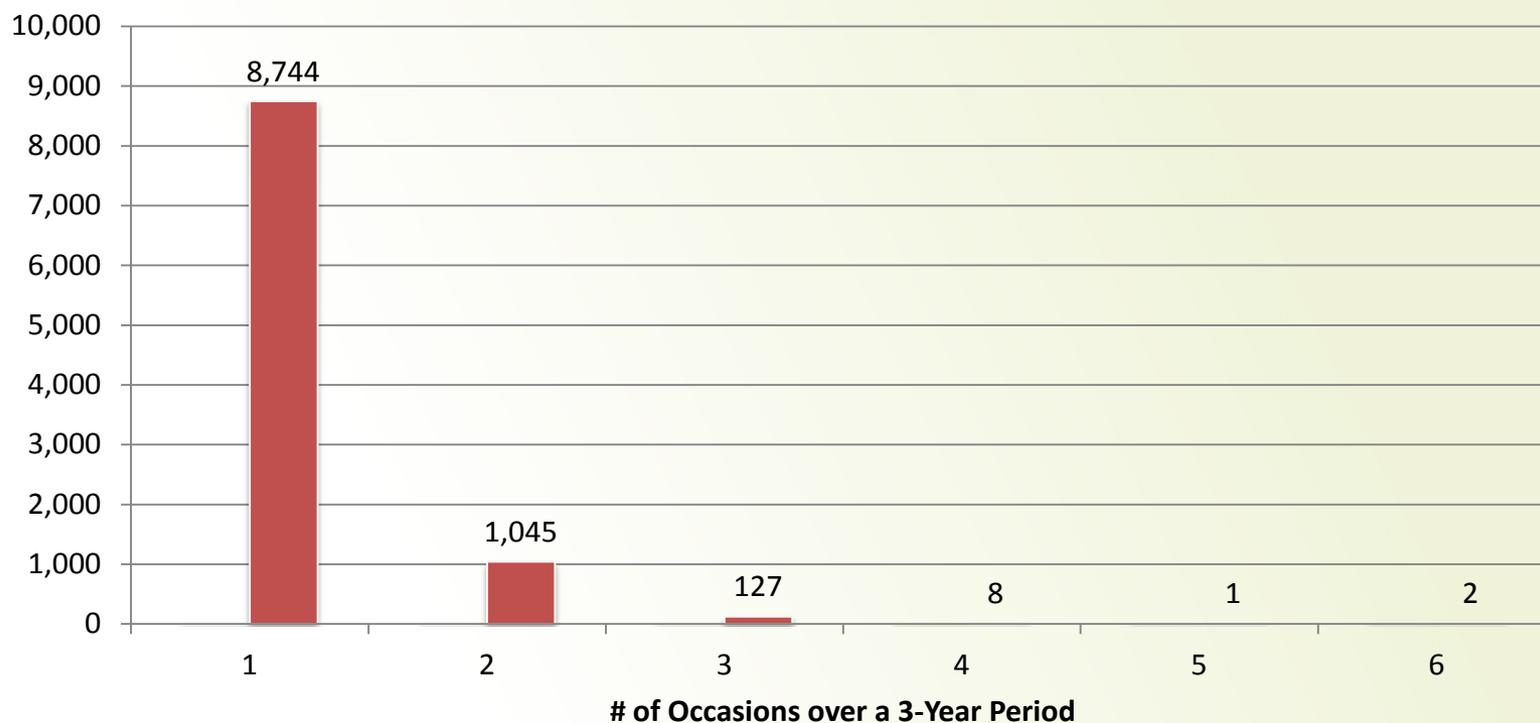
Descriptive statistics

- Total # of past program enrollments: **31,518**
- Avg # of past program enrollments: **3.2**
- Total # of occasions in last 3 years: **11,264**
- Avg # of occasions in last 3 years: **1.1**
- Avg length of current occasion: **174.8 days**
- Avg time spent homeless: **200.4 days**
- Chronically homeless clients: **905 (9.1%)**



Descriptive statistics

Total Number of Homeless Occasions Experienced by Clients





Overview: Important points

- **Automated procedures** can drastically expand analysis of homeless occasions.
- Establishing the **begin date** and **end date** is essential for measuring an occasion.
- An easy next step is to calculate chronic homelessness status.
- GA data looks fairly reliable overall, BUT **destination data quality needs to be improved.**



Future study

- Primary goal is to obtain a better measurement of **chronic homelessness**.
- Currently, our HMIS system has a very subjective yes/no chronic homelessness indicator that users select manually.
- I've developed a second, more-automated measure using the algorithm described here.



Future study

- Research question: Which of the 2 indicators is the more accurate measure?
- Indicator classifications will be compared with results from a cluster analysis of HMIS data.
- If more accurate, the algorithm-based indicator could be worked into our HMIS interface.



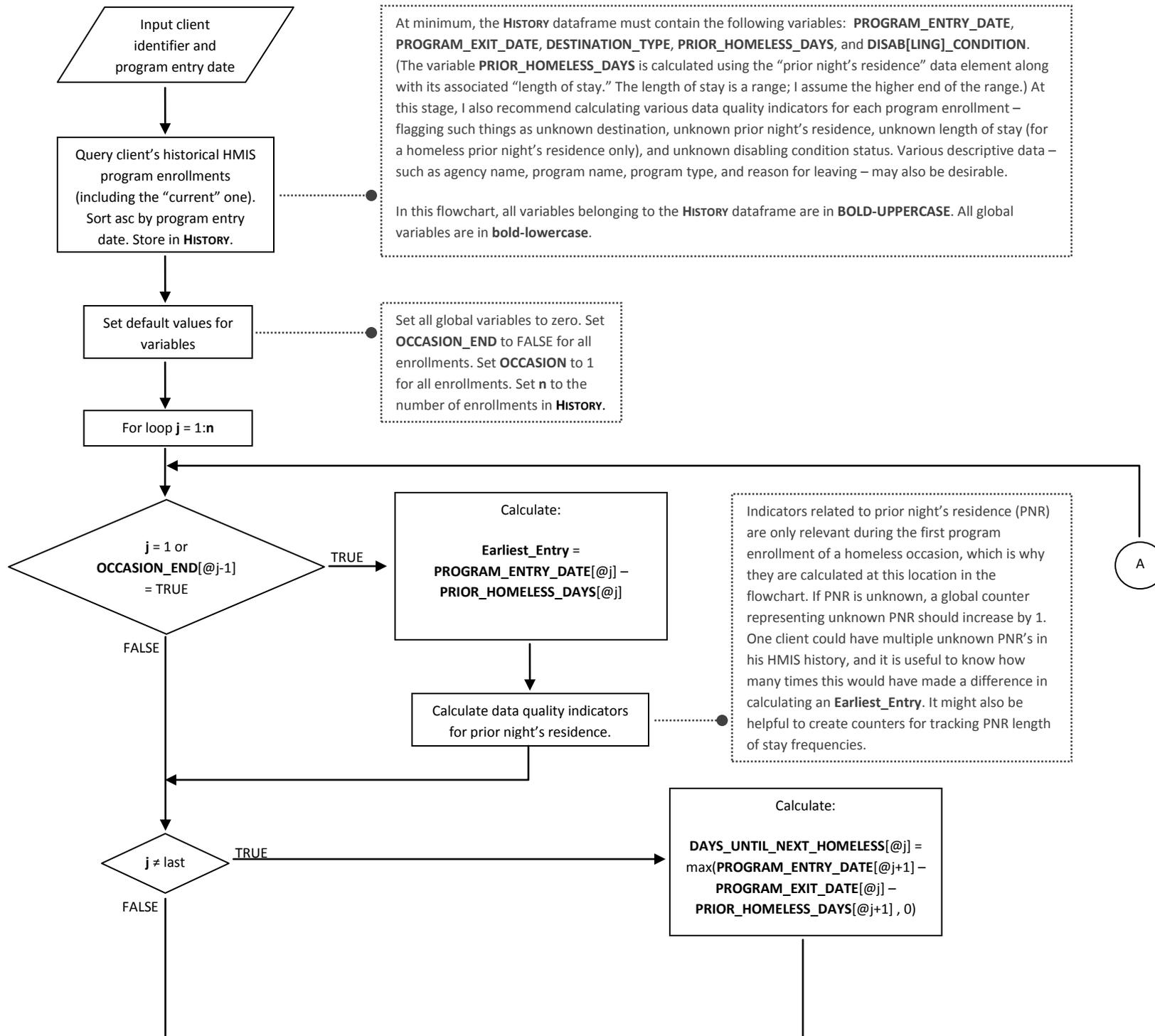
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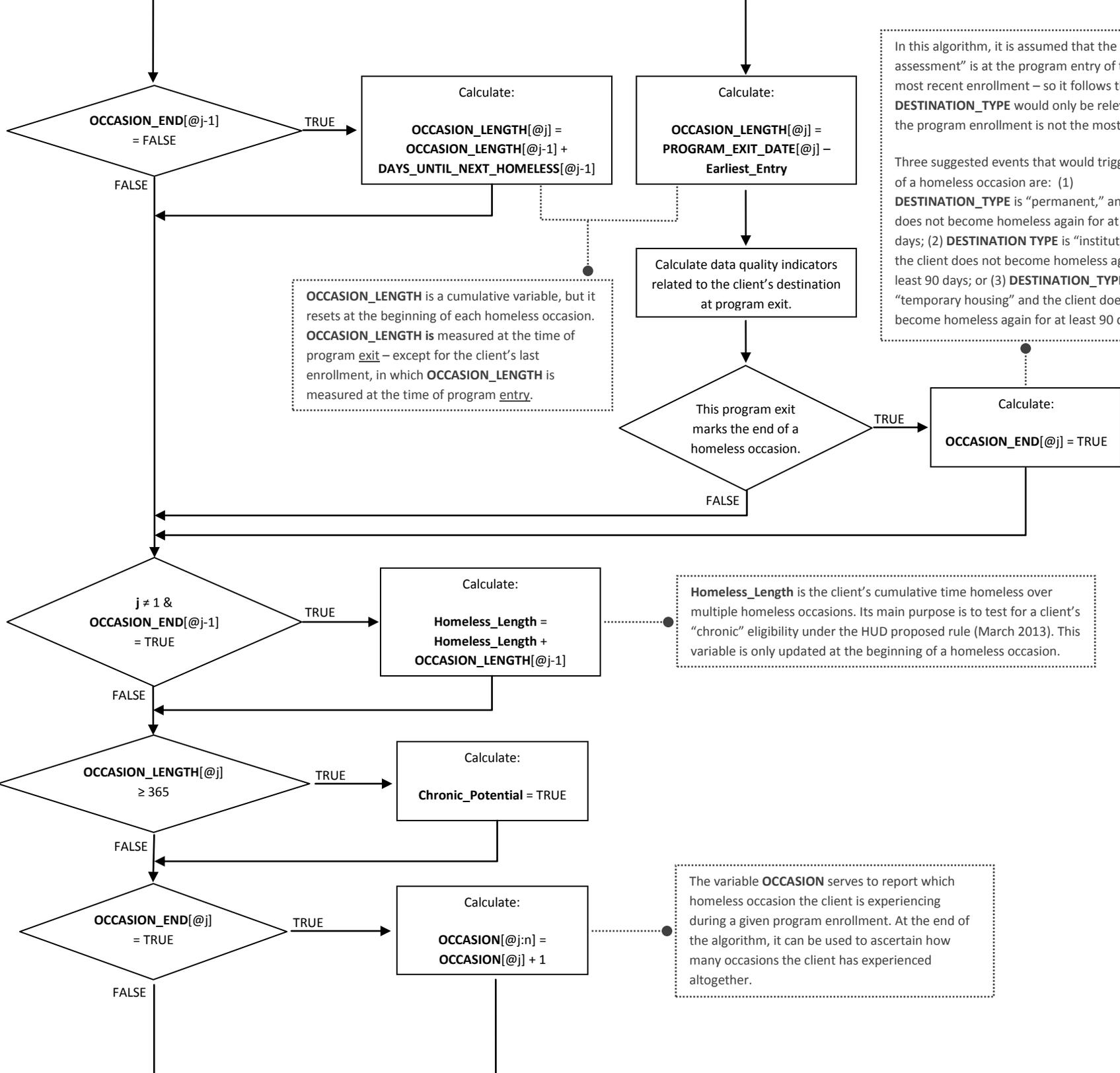
Please contact me if you have questions or critiques!

CHRONIC HOMELESSNESS ASSESSMENT ALGORITHM (FOR ONE CLIENT)



In this algorithm, it is assumed that the “point of assessment” is at the program entry of the client’s most recent enrollment – so it follows that **DESTINATION_TYPE** would only be relevant where the program enrollment is not the most recent.

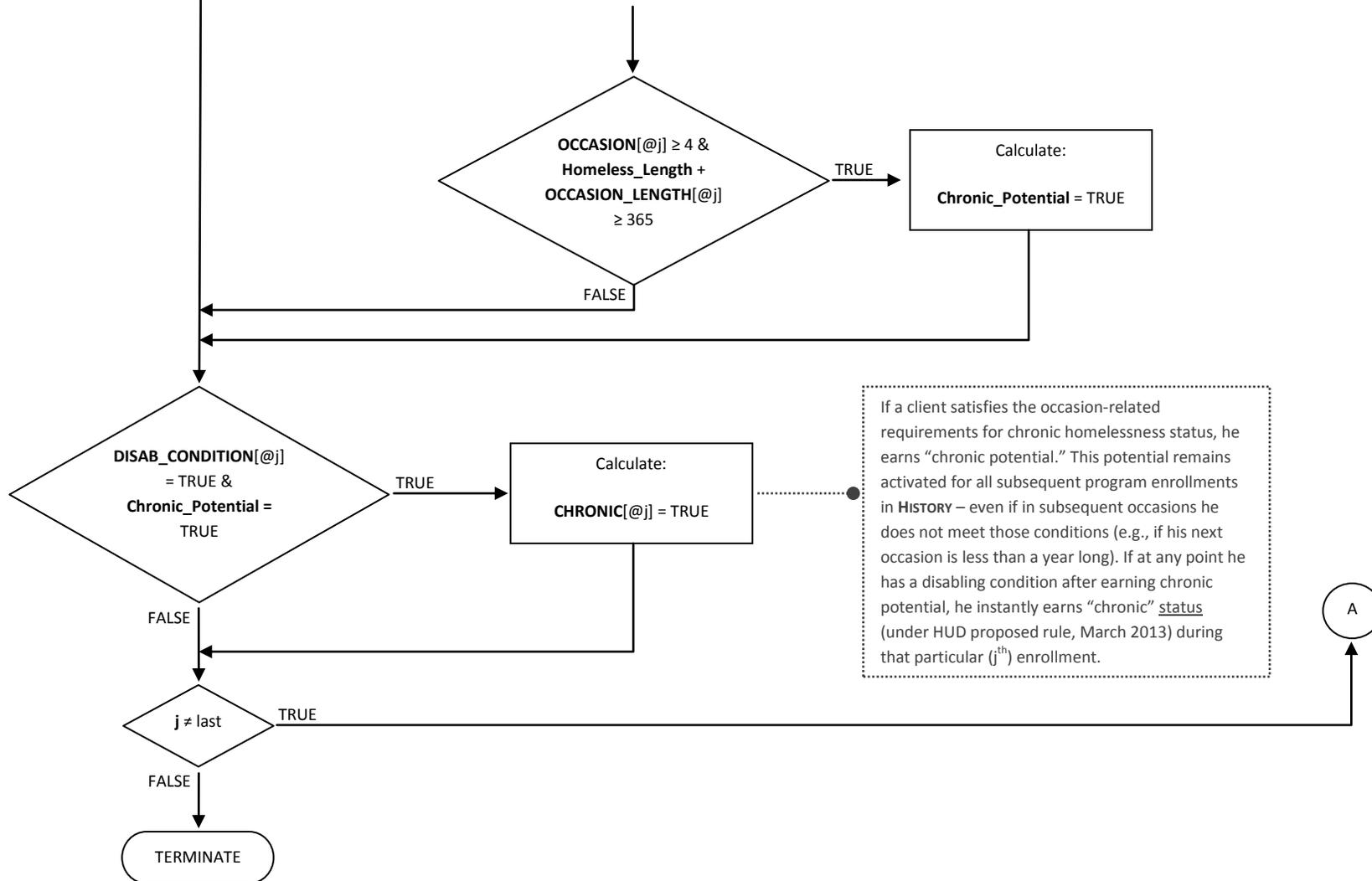
Three suggested events that would trigger the end of a homeless occasion are: (1) **DESTINATION_TYPE** is “permanent,” and the client does not become homeless again for at least 30 days; (2) **DESTINATION_TYPE** is “institutional,” and the client does not become homeless again for at least 90 days; or (3) **DESTINATION_TYPE** is “temporary housing” and the client does not become homeless again for at least 90 days.



OCCASION_LENGTH is a cumulative variable, but it resets at the beginning of each homeless occasion. **OCCASION_LENGTH** is measured at the time of program exit – except for the client’s last enrollment, in which **OCCASION_LENGTH** is measured at the time of program entry.

Homeless_Length is the client’s cumulative time homeless over multiple homeless occasions. Its main purpose is to test for a client’s “chronic” eligibility under the HUD proposed rule (March 2013). This variable is only updated at the beginning of a homeless occasion.

The variable **OCCASION** serves to report which homeless occasion the client is experiencing during a given program enrollment. At the end of the algorithm, it can be used to ascertain how many occasions the client has experienced altogether.



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