Center for Advanced Studies in Child Welfare

MINN-LINK Minnesota-Linking Information for Kids

Minn-LInK Issue Brief

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Estimating Homeless and Highly Mobile Students

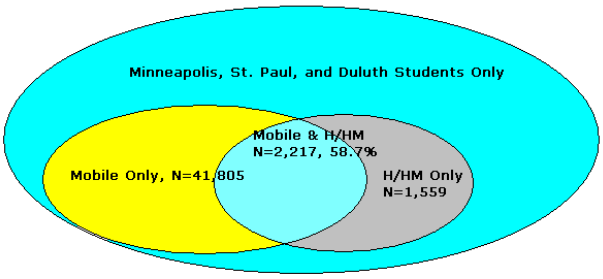
The Visibility of Homelessness

The current economic downturn is resulting in a marked increase in the number of students whose families are homeless or highly mobile (H/HM) and in need of school services, particularly the transportation supports allowed by the McKinney-Vento policy. In spite of the increase in students identified by school staff or who self-identify as H/HM, accurate estimates of the total number of students who are potentially affected by homelessness and high mobility are hard to come by. Without accurate estimates of the extent of this problem, it is difficult for schools and community practitioners to determine what proportion of the population their services are reaching or make accurate requests for the additional resources needed to meet those needs.

The newly released report*, Homeless and Highly Mobile Students in Minnesota* (profiled in Brief 7A) is one of the first population-based, state level descriptive studies of this student population. To uncover the cross-system involvement of H/HM students, we created a large dataset that contained historical and current data on H/HM students which we could compare to similar data on Non-Mobile students in the same districts for the same school year. The dataset contained three main groups of students based on known H/HM and mobility status: 1) students who were identified as H/HM by schools; 2) students who showed no sign of mobility (Non-Mobile); and 3) students who were not identified by schools as H/HM but who were mobile during the school year (Mobile).

To build our estimation models, we applied what we learned from comparing Non-Mobile to H/HM students to the Mobile student group. Our logic was that if there were additional, un-identified homeless or highly mobile students in our data, they were likely to be among Mobile students.

Figure 1. Data Groups



Model Foundations

Our models, which were based on logistic regression risk ratios, are also supported by findings in the literature on homeless students. For instance, research has found strong correlations between poverty and homelessness among students (Masten et al., 1997; Obradovic et al., 2007; Rafferty et al., 2004; Rubin et al., 1996; Zima et al., 1994) and numerous studies acknowledge the fact that people of color are disproportionately more likely to be poor. These correlations are also reflected in our data.

Our data also showed a significant correlation between falling school attendance prior to the year of H/HM identification. While there was no previous literature reflecting this precise relationship, there is growing evidence that homeless students experience multiple negative educational outcomes that can affect school engagement and that family circumstances usually deteriorate prior to homelessness. Specifically, homeless students are more likely to change schools, receive special education services, repeat a grade, have lower attendance rates, and exhibit behavior problems (Buckner, et al., 2001; Masten et al., 1997; Rafferty et al., 2004; Rubin et al., 1996) – all of which can affect student likelihood of attending school or overall academic achievement.

Model Factors

When comparing attributes of Non-Mobile and H/HM group members, some strong predictors of whether or not students were more likely to be H/HM than Non-Mobile included being Black or African-American, being Native American, and having more than one residential district move. Many attributes were strongly correlated with one another and it was important to limit the model to the fewest possible predictors. Two of the strongest predictors were whether students had been eligible for free meals (log odds ratio = 64.6) and whether school attendance was below 90% in the previous school year (2004-2005) (log odds = 1.7). Two models were created: 1) one that took race (either Black/African-American or American Indian) into account; 2) and one that did not.

Findings

The log odds from comparing Non-Mobile to H/HM students were used to create models that were then applied to the Mobile students who were not identified by the districts. The models are expressed as

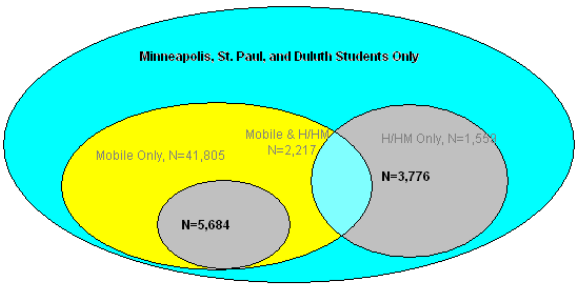
Model 1) log(odds)=β0+β1*x1+β2*x2+β3*x3+error
and
Model 2) log(odds)=β0+β1*x1+ β3*x3+error

Where β1*x1 = free meals, β2*x2 = race (Black/AmerInd), β3*x3 = prior year's poor attendance, plus an error term.

Model 1

Applying Model 1 to the 41,805 students who were Mobile resulted in an additional 5,684 students. This increases the proportion of H/HM from 3.6% of all students in these three districts to 9% (9,460).

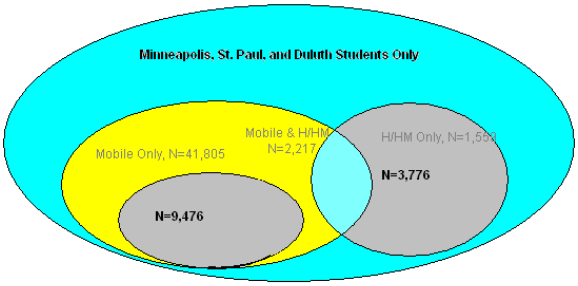
Figure 2. Model 1



Model 2

Model 2 removed the influence of race, opening up the possibility of Caucasian, Asian, or Hispanic students as equally likely to be homeless if they met the other two model criteria (being eligible for free meals and having attendance that fell below 90% in the previous year). This model adds another 9,476 students as potentially H/HM, increasing the H/HM percent for these three districts to 12.6%.

Figure 3. Model 2



The Center for Advanced Studies in Child Welfare (CASCW) is a resource for child welfare professionals, students, faculty, policy-makers, and other key stakeholders concerned about child welfare in Minnesota. **Minn-LInK** is a unique collaborative, university-based research environment with the express purpose of studying child and family well being in Minnesota using state administrative data from multiple agencies. For more information, contact Kristine Piescher at 612-625-8169 or email at kpiesche@umn.edu.

To read the full report, visit the CASCW web site at http://cascw.umn.edu and follow the link to Publications or Minn-LInK.

Discussion Points

The H/HM estimates that resulted from the models built here are relatively reasonable when compared to what few estimates of homelessness have been attempted in the past.

- The General Accounting Office (1989) suggested a multiplier of 2.7 for any known homeless population. If applied to the H/HM population from our three study districts, this results in an estimate of 9.7%, or 10,195 of all students
- A recent *Time* article (March, 2009) reported that one in ten students in Minneapolis schools is now homeless.
- Estimates of homelessness on smaller, specific sub-populations have ranged from 2.8 – 5.0% (for students) (Triangle Research Institute, 1993) and can only be considered a portion of any overall H/HM student population.

Next Steps

While over-identification should be avoided, reaching out to any student who shares these attributes (a falling attendance history, poverty status, or changes in residential district) can help local jurisdictions intervene earlier in the lives of students for whom homelessness may be just one of many challenges they are facing.

As homeless populations continue to be part of our communities, it is crucial that we have a broad understanding of the needs of students. Future research should strive to refine population estimation and identification methods to enhance funding requests for service dollars, evaluate program reach, and intervene earlier in student's lives. In particular models might incorporate:

- Contextual community factors, foreclosure rates, shelter use rates, joblessness rates and applications for public assistance.
- Information from other systems that would provide important family stress markers such as child welfare system involvement or public assistance use.

References

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