

COMMUNITY HEALTH ASSESSMENT STUDY
DISCUSSION PAPER #1

DEFINING THE SERVICE AREA

REPORT TO
COMMUNITY HEALTH ASSESSMENT
STEERING COMMITTEE

OCTOBER 1, 2010

Community Health Assessment Study

Defining the Service Area

Discussion Paper #1

This discussion paper was prepared as a follow up to the initial meeting of the Community Health Assessment Steering Committee held on September 22, 2010 in which the definition of the service area was discussed. The Service Area definition is important since it must reflect those communities the Steering Committee believes were most affected by the closure of St. Vincent's. Once identified, data will be assembled to understand and project the health care needs of the population and develop recommendations to meet those needs as part of the Community Health Assessment Study.

For the purposes of organizing the analysis it is helpful to identify those communities which comprise the core or primary service area (PSA) and those who may be considered part of the secondary service area (SSA). We divide the service area into the PSA and SSA so as not to mask or dilute important observations which could lead to errant conclusions or incomplete solutions. The PSA are typically those residents who are most affected by the closure of St. Vincent's due to dependency, utilization or proximity. The SSA would be those who would also be impacted by the hospital's closure but may be less so when compared to the PSA.

In defining the Service Area the Steering Committee reached a consensus that the core communities constituting the PSA should include the following ZIP Codes:

- 10001 (Herald Square)
- 10011 (Chelsea)
- 10012 (Prince)
- 10014 (Village)

Essentially, these ZIP Codes are bounded (but not precisely) by 34th Street to the North, Broome Street to the South, the Hudson River to the West and Fifth Avenue/Bowery to the East.

The Steering Committee also agreed that the SSA should include 10013 so that the southern boundary of the study area extends to Canal Street. In addition, the Steering Committee believed part of neighboring 10003 to the east should also be included in the SSA definition. Collectively, the four ZIP Codes which define the PSA and these two SSA Zip Codes would then include the entire population of Community Board 2 and relevant portions of the population residing within Community Boards 1 and 4.

Some members thought the SSA should be further expanded to include those residents in 10009 and 10002 as well as 10038, the community surrounding N.Y. Downtown Hospital. The SSA would then encompass all of Community Board 3 and an additional portion of Community Board 1. Thus, the proposed SSA would include the following ZIP Codes:

- 10002 (Knickerbocker)
- 10003 (Cooper)
- 10009 (Stuyvesant)
- 10013 (Canal)
- 10038 (Peck Slip)

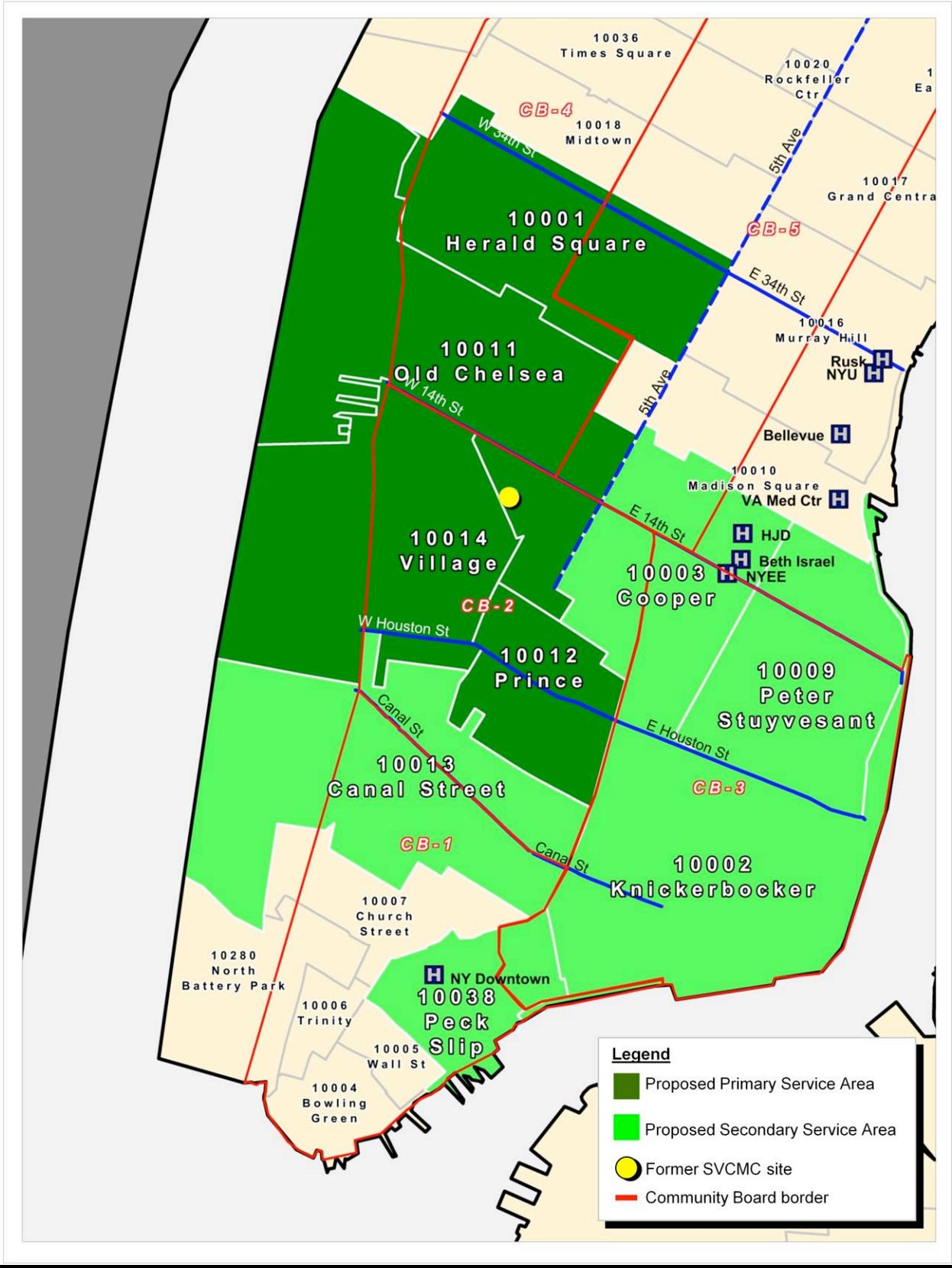
The boundaries of the proposed service area (PSA and SSA) appear in Map 1. The communities which are highlighted in dark green are the PSA and those of the SSA appear in lighter green.

Since there was a difference of opinion among the Steering Committee on the composition of the SSA, a request was made to analyze the inpatient and emergency utilization of communities included and report back to the Steering Committee information regarding the degree to which these communities were dependent upon St. Vincent's.

Source of Data

Every hospital in New York State is required to file a discharge data abstract on every inpatient discharge, emergency visit and ambulatory surgery procedure. This abstract contains over 70 fields of data and is submitted to a division within the NYS Department of Health known as the Statewide Planning and Research Cooperative System, commonly referred to as SPARCS. We accessed this database to highlight the top five hospitals used by the proposed Primary and Secondary Service area residents with respect to inpatient admissions and emergency visits which did not result in an admission. When a patient is treated in an emergency department and returns home, we refer to this as a "treat and release". The treat and release visits were used rather than emergency visits resulting in an admission since those patients would be counted in the inpatient data.

A top line review of SPARCS data appears below to quantify the dependency of the service area ZIP Codes upon SVCMC so that the Steering Committee could either validate or revise its definition of the Primary and Secondary service areas. We used all inpatient admissions as the unit of analysis. This would include patients hospitalized for all acute conditions, e.g. medical, surgical, pediatrics, obstetrical, mental health, substance abuse and rehabilitation.

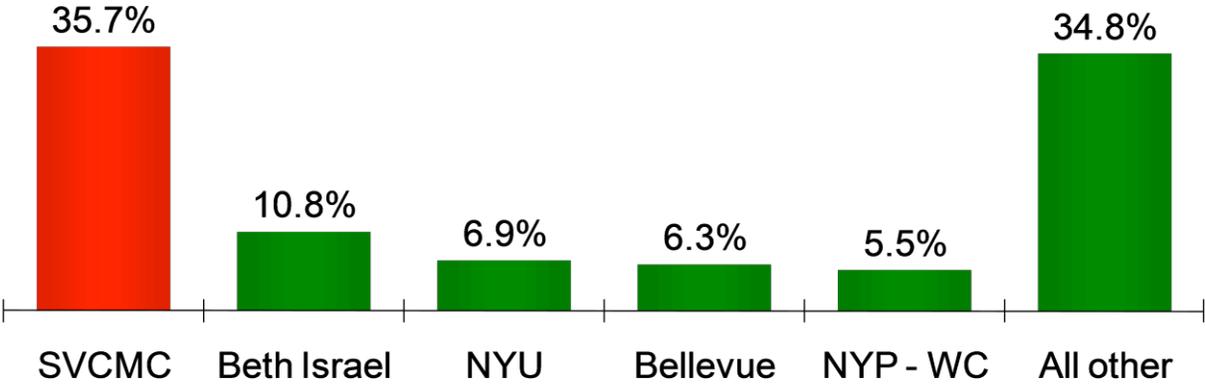


Map 1 – Zip Codes Comprising Primary and Secondary Service Areas

Findings

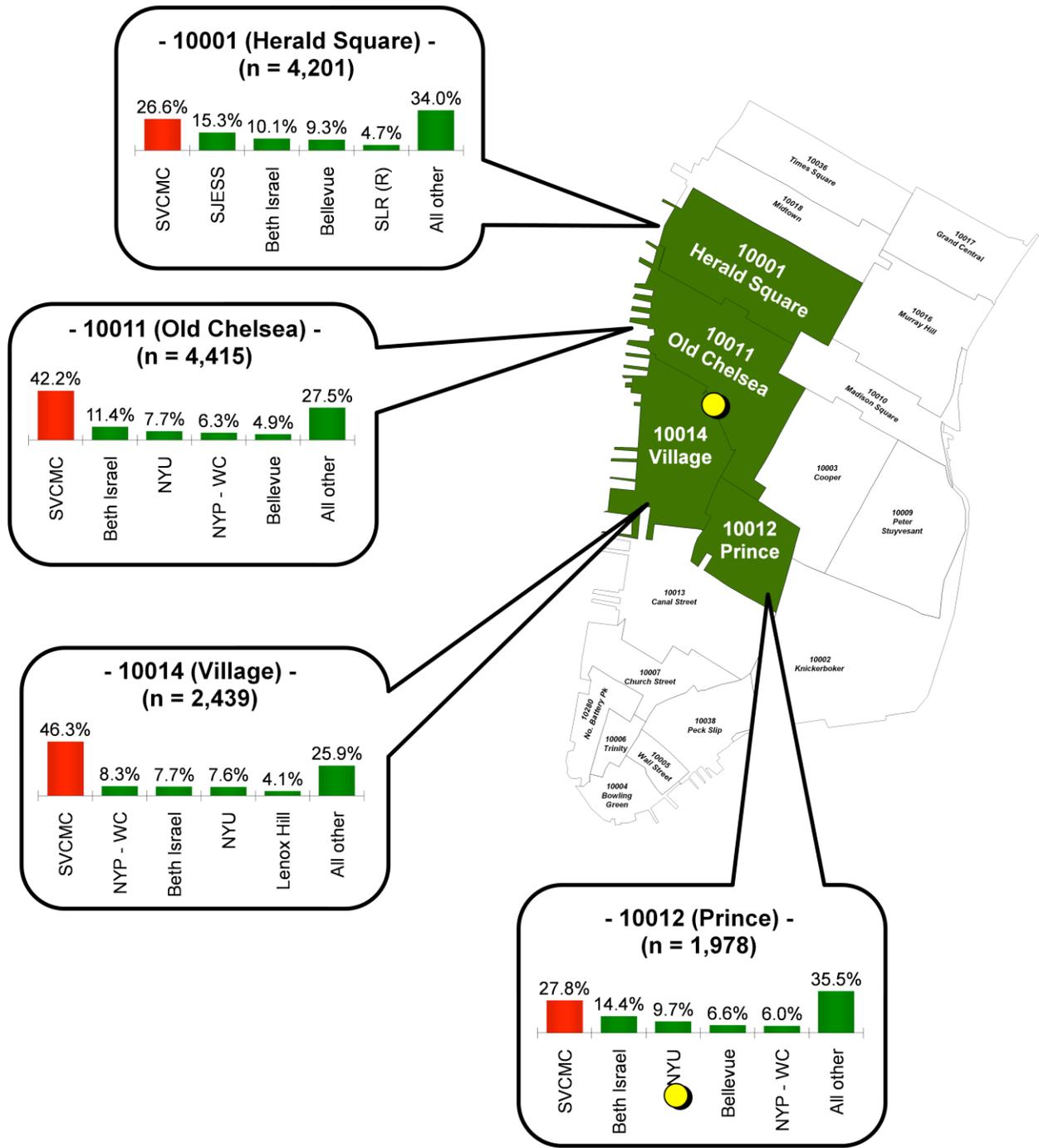
The top five hospitals used by the PSA ZIP Codes appear in Table 1. Residents of those communities primarily used St. Vincent's and it was their hospital of choice. Over one third (36%) of the PSA population relied on St. Vincent's and their physicians for access to inpatient care and 64% used hospitals other than St. Vincent's. Approximately 30% of PSA residents used four other hospitals; Beth Israel Medical Center, NYU Medical Center, Bellevue Hospital and NYP-Weill Cornell Medical Center and almost as many persons who sought care at St. Vincent's or the four neighboring hospitals used hospitals elsewhere in New York.

Table 1
Top 5 Hospitals used by Primary Service Area, 2009
(10001, 10011, 10012 and 10014)
- Inpatient Admissions -
(n = 13,033)



When the PSA utilization was analyzed at the ZIP Code level over 40% of hospitalized residents of 10011 and 10014 were most dependent on St. Vincent's while approximately 55% sought care elsewhere, see Table 2. The interpretation of this data should be accompanied by the following caveat. There appears to be a significant amount of substance abuse patients residing in 10011 who are hospitalized outside of Manhattan. This may be due to a coding error or to a referral relationship which cannot be easily verified. We will investigate this issue as the study progresses. Nevertheless, even if we eliminate the substance abuse admissions ZIP Code 10001 would still have a high percentage of persons who relied on St. Vincent's for their inpatient care.

Table 2
Top 5 Hospitals used by Primary Service Area, 2009
- Inpatient Admission -
(n = 13,033)



Source: NYS DOH SPARCS; excludes Newborns and Neonates (by MS-DRG), 2009

Residents to the north in 10001 and to the south residing in 10012 viewed St. Vincent's as their hospital of choice although only slightly more than 25% of patients did so. This means that almost 70% of patients from these ZIP Codes relied on other hospitals.

Emergency visit utilization of PSA patients who were treated and released by St. Vincent's appear in Table 3. The data indicated over 55% of PSA residents sought emergency care at St. Vincent's. When the treat and release data for ZIP Codes within the PSA was reviewed, residents residing closest to the hospital in 10011, 10014, were most dependent on St. Vincent's with over 60% of the population being treated and released through its emergency department. Those to the north and south in the PSA were also dependent but to a lesser extent, 52% and 39%, respectively, see Table 4.

Table 3
Top 5 Hospitals used by Primary Service Area, 2009
(10001, 10011, 10012 and 10014)
- ED Visits (Treat & Release) -
(n = 27,405)

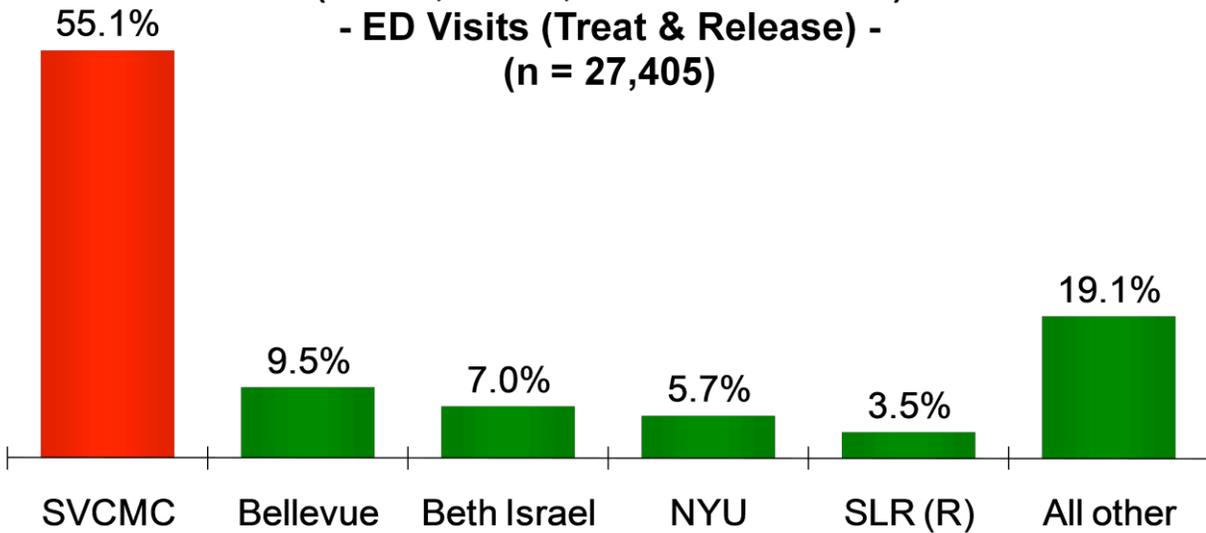
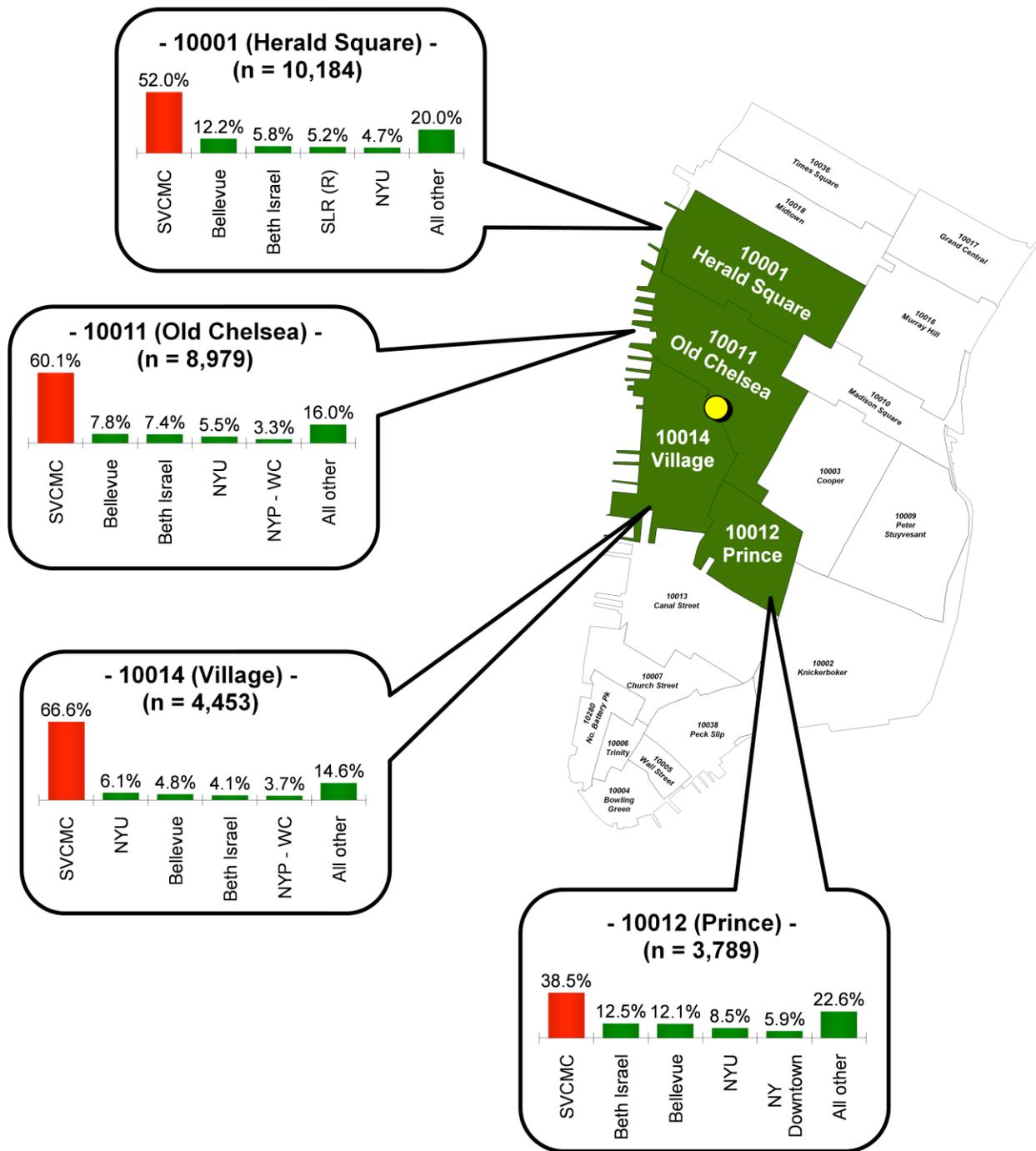


Table 4
Top 5 Hospitals used by Primary Service Area, 2009
- ED Visits (Treat & Release) -
(n = 27,405)

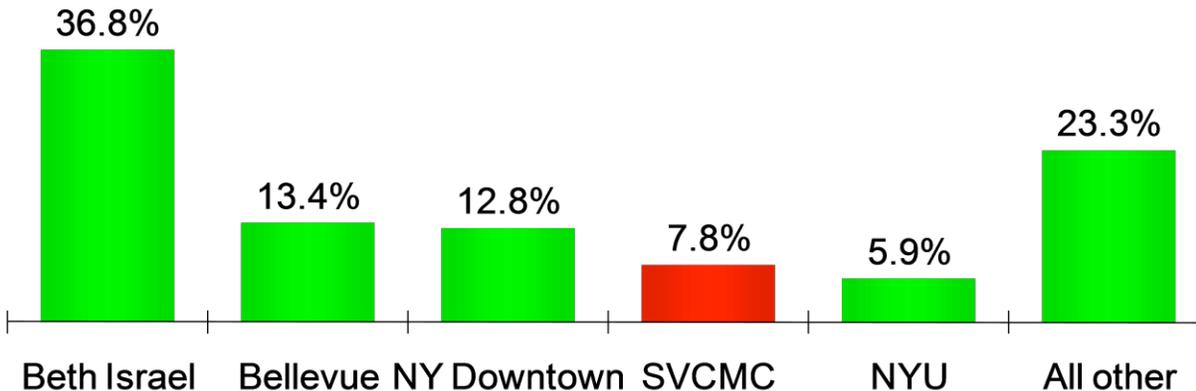


Source: NYS DOH SPARCS; excludes Newborns and Neonates (by MS-DRG), 2009

Secondary Service Area

The data for residents in the SSA shows quite a different picture. Collectively, inpatient utilization by patients in the five SSA ZIP Codes identified by the Steering Committee indicate that only 8% of residents used St. Vincent's ranking it fourth in preference while over 90% of residents used other hospitals, see Table 5. Beth Israel was the most preferred hospital in the SSA and when combined with Bellevue and NY Downtown, who were ranked ahead of St. Vincent's, these three accounted for 70% of all inpatient admissions from the SSA.

Table 5
Top 5 Hospitals used by Secondary Service Area, 2009
(10002, 10003, 10009, 10013 and 10038)
- Inpatient Admissions -
(n = 27,882)



Source: NYS DOH SPARCS; excludes Newborns and Neonates (by MS-DRG), 2009

When the SSA data was analyzed at the ZIP Code level St. Vincent's was ranked second in inpatient utilization by two of the five SSA Zip Codes; 10003 and 10013, the two that the Steering Committee initially identified as part of the SSA, see Table 6. St. Vincent's accounted for 11% and 14% of inpatient discharges, respectively, from these ZIP Codes while the majority of residents in 10003 relied on Beth Israel and those in 10013 relied slightly more on NY Downtown for inpatient care.

The data from the other SSA Zip Codes indicated significantly weaker ties to St. Vincent's. Utilization by residents in these communities 10009, 10038 and 10002 ranked St. Vincent's third, fourth or fifth, in order of hospital preference. No more than 6% of residents from these ZIP Codes who were hospitalized in 2009 were hospitalized at St. Vincent's. Stated another way, 93% of residents of ZIP Codes 10003, 10009 and 10038 chose to be hospitalized elsewhere.

When the emergency treat and release visit data from the SSA were reviewed it reflected similar trends as those reported for inpatient utilization, see Table 7. Collectively, the SSA residents ranked St. Vincent's fourth and it accounted for 7% of total emergency treat and release visits. At the ZIP Code level 10003 and 10013 residents preferred other hospitals but used St. Vincent's second most frequently while those residing in 10002, 10009 and 10038 used St. Vincent's substantially less, see Table 8.

Observations

The inpatient and emergency treat and release visit utilization data presented above confirms the Steering Committee's definition of the PSA to include ZIP Codes 10001, 10011, 10012 and 10014. St. Vincent's was the most preferred hospital for these communities where it was ranked #1 based upon inpatient and emergency treat and release visit utilization.

The Steering Committee may, however, wish to revisit its definition of the SSA based upon these findings. The two identified SSA ZIP Codes bordering the PSA, 10003 and 10013 ranked St. Vincent's as their 2nd most preferred hospital and confirmed the consensus reached by the Steering Committee that these ZIP Codes should be included as part of the SSA.

However, the low utilization (both inpatient and emergency) of St. Vincent's by residents of ZIP Codes 10002, 10009 and 10038 should be discussed by the Steering Committee to determine whether they should be included as part of the SSA in the Community Health Assessment study. There is concern about the potential dilutive impact on the importance of St. Vincent's to the SSA communities and inclusion of these areas could mask or distort access issues for the communities who were more impacted by the hospital's closure.

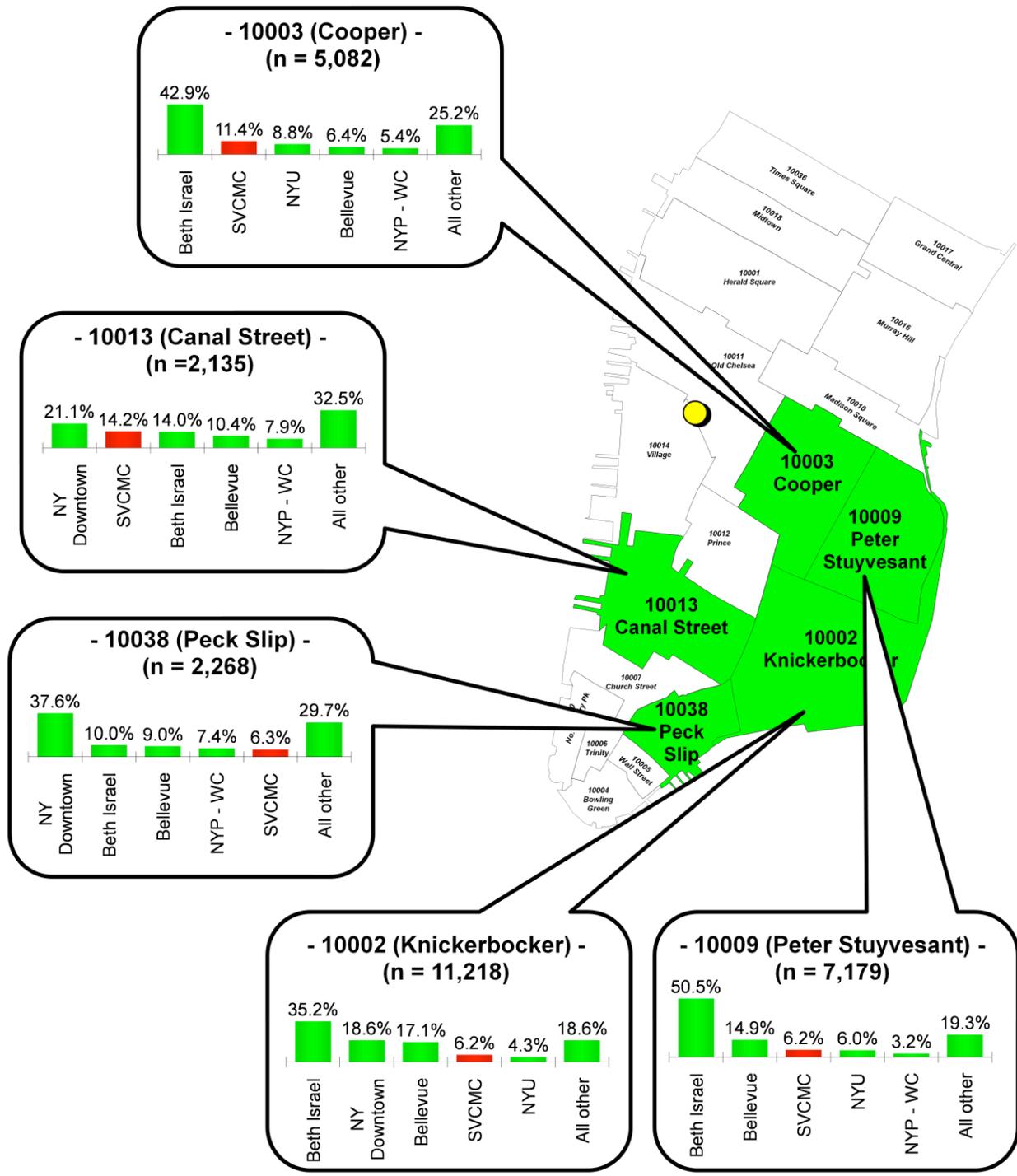
Alternatively, the Steering Committee may decide, notwithstanding the information provided herein, that it is important to include these three ZIP Codes in the study as part of the SSA. We would then propose to modify the PSA and SSA definition as follows:

- Including 10003 and 10013 in the PSA definition and 10002, 10009 and 10038 as the SSA definition, or;
- Divide the SSA and present data for 10003 and 10013 separately as SSA-I and that for 10002, 10009 and 10038 as SSA-II or "other service area".

The first option may obscure a service gap or need or dilute the importance of St. Vincent's to the PSA or worse, make the SSA less relevant to the study's objective. The second option, however, not only presents an additional analytical burden, which can be accommodated but, it can potentially be confusing and distracting by including and discussing data which may not be critical to the Steering Committee's objectives.

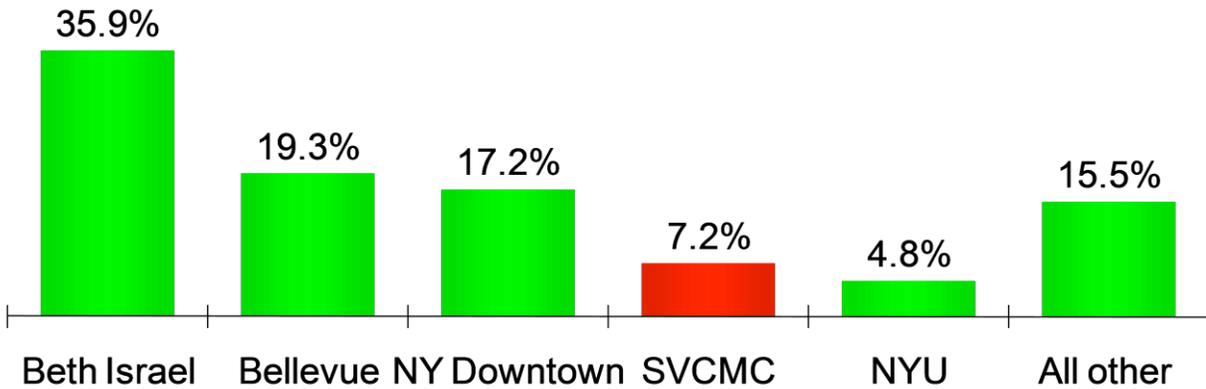
The Steering Committee should address this issue at their next meeting and confirm the service area definition.

Table 6
Top 5 Hospitals used by Secondary Service Area, 2009
- Inpatient Admission -
(n = 11,218)



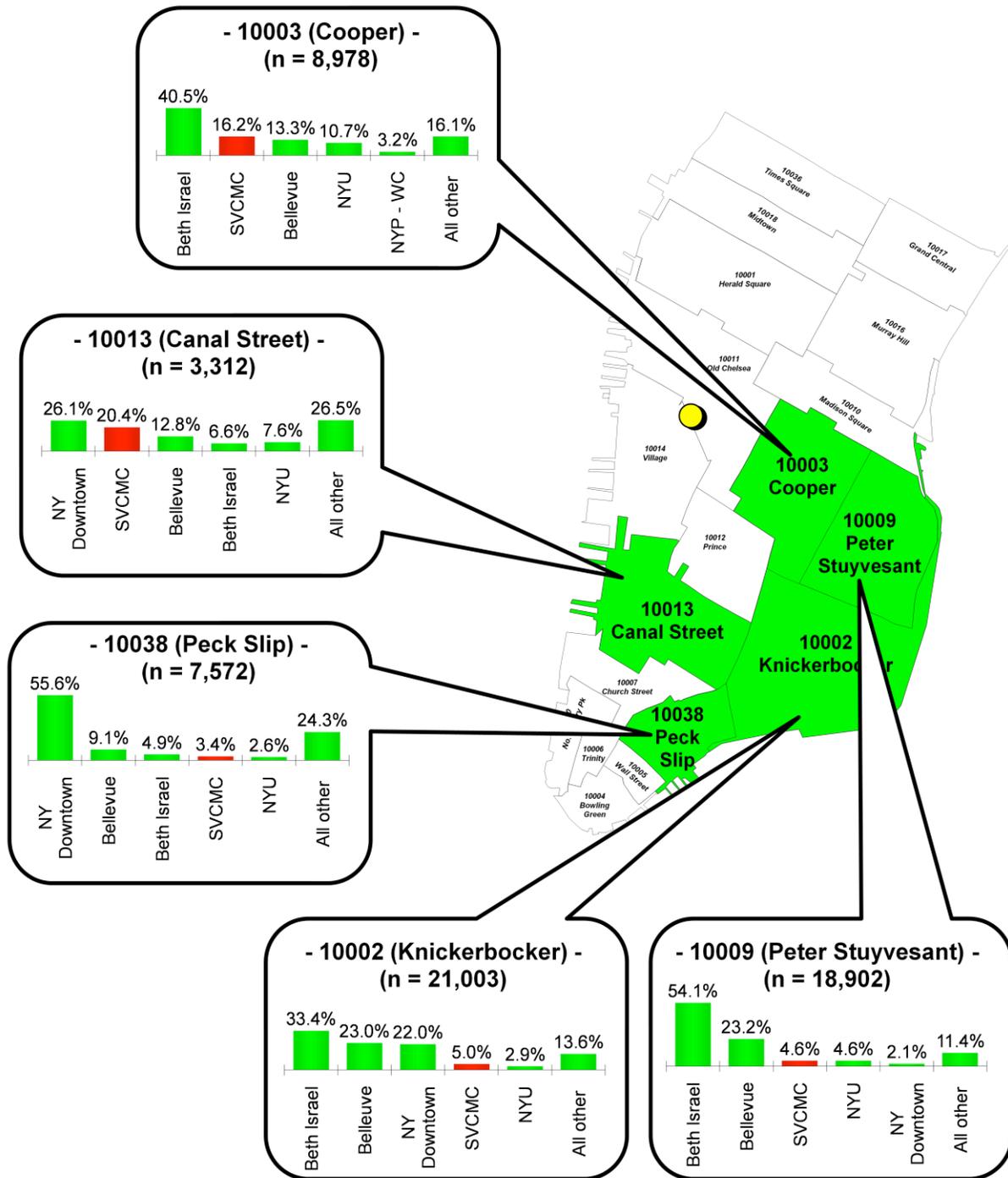
Source: NYS DOH SPARCS; excludes Newborns and Neonates (by MS-DRG), 2009

Table 7
Top 5 Hospitals used by Secondary Service Area, 2009
(10002, 10003, 10009, 10013 and 10038)
- ED Visits (Treat & Release) -
(n = 59,767)



Source: NYS DOH SPARCS; excludes Newborns and Neonates (by MS-DRG), 2009

Table 8
Top 5 Hospitals used by Secondary Service Area, 2009
- ED Visits (Treat & Release) -
(n = 59,767)



Source: NYS DOH SPARCS; excludes Newborns and Neonates (by MS-DRG), 2009