KIDSNET DATA BOOK 2015

Background

KIDSNET was established in 1997, growing out of a desire to create a child-based profile of preventive health services. Because KIDSNET has the advantage of having both individual child information as well as population-based data, categorical programs can not only see who has received services, but perhaps more importantly, who hasn't received services. This information is useful in developing outreach strategies to families. Through KIDSNET, community partners such as primary care providers, family visitors, school nurses, and others can access relevant information from sources not previously available to them to assure and coordinate services for children in their care.

Strict security and confidentiality policies are in effect to protect the information and to assure that only those authorized by law have access. All pediatricians and family practice providers seeing children are connected to KIDSNET and provide immunization information on children receiving care in Rhode Island. Data related to newborn screening (developmental risk, bloodspot, hearing), vital records, the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), lead poisoning, Early Intervention, and Family Visiting are also stored in KIDSNET. Through regular and ad hoc reports as well as online tools, KIDSNET data have been used for quality assurance activities, coordination of care, reminders, and to inform policy decisions.

This data book has been created to provide a sample of ways to look at KIDSNET's integrated data using maps. The use of mapping provides insight into the distribution of public health services based on residence. For many indicators of health status, while the statewide level may be commendable, analysis at the city/town level reveals disparities. Although not presented here, further analysis at the neighborhood level would likely reveal similar differences. Such geographic comparison can be used to target outreach and services to residents in areas with the lowest participation in public health services and to monitor improvement (or decline) over time.

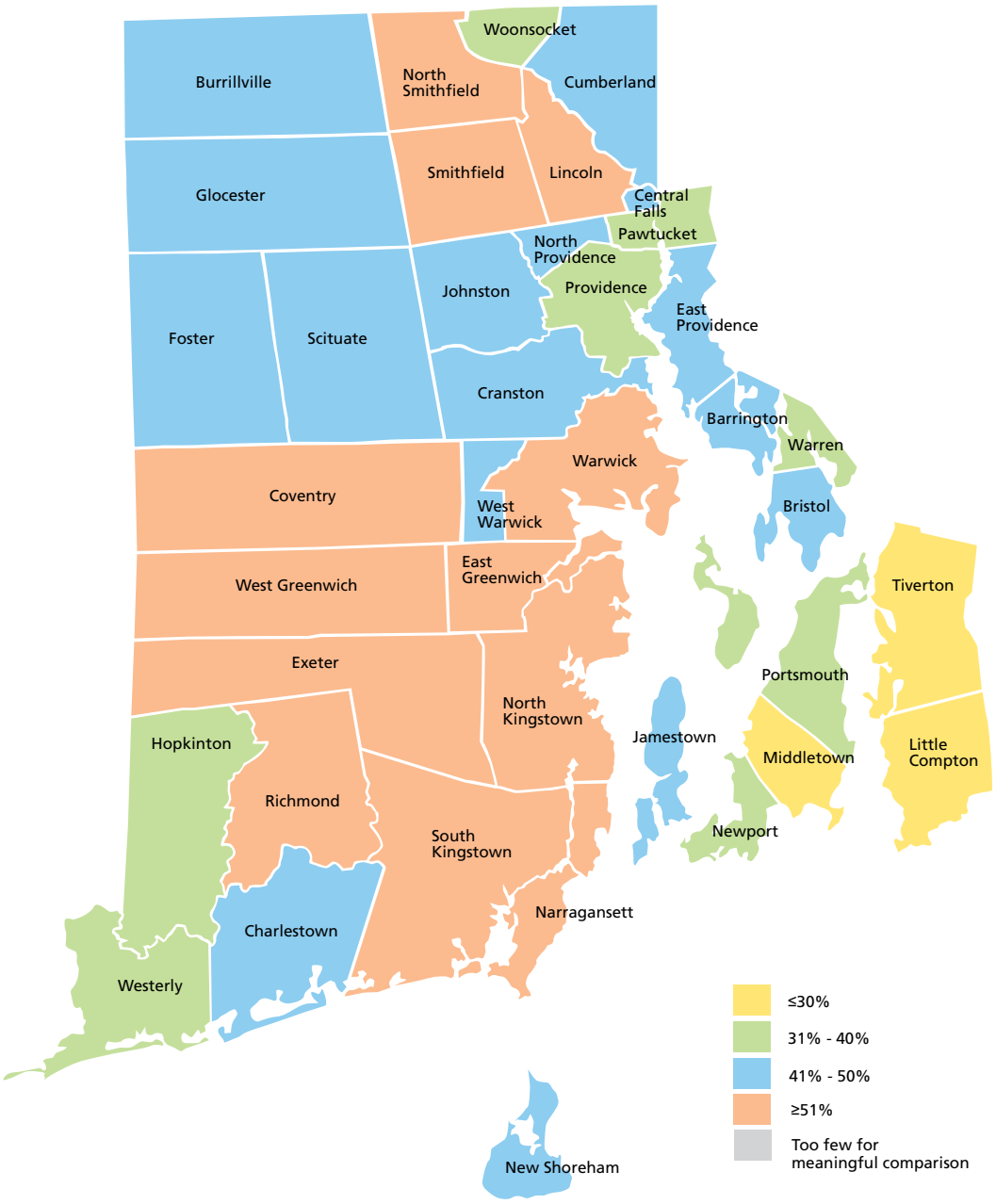
KIDSNET records are opened for all children born in Rhode Island. For those not born here, records are opened when the first public health service, such as an immunization, is reported. Only children whose most recent KIDSNET address is in Rhode Island are included in the analyses presented here. Lead screening information is included on children screened in Rhode Island and for children who live in Rhode Island but who are screened in other states. Immunization data in KIDSNET is based on what has been submitted by primary care providers and for some practices may under represent actual immunization rates. Children not receiving primary care in Rhode Island were excluded from analyses involving immunization. Much of the data are presented as percentages on maps. This data book does not analyze if any of the differences are statistically significant and does not include results if the denominator is below 20, as that makes comparison of percentages less meaningful. The focus on maps is meant to stimulate thought about looking for geographical differences in public health data.

Influenza vaccination rates among children, 2012-2013

The 2009 H1N1 influenza outbreak was a reminder of how serious a threat influenza can be. Prior to the development of a vaccine, influenza killed large numbers of people, especially during epidemics. Even today, Americans die each year from influenza, with young children and the elderly being the most vulnerable. Vaccination is the best protection from influenza. Opportunities for Rhode Islanders to get a flu shot include their primary care doctor, work place clinics, community clinics, schools, and pharmacies. The more people who are vaccinated, the more difficulty the virus has spreading.

Rhode Island has among the highest vaccination rates for children in the country. Results of the National Immunization Survey for the 2012-2013 influenza season showed 82% of Rhode Island children ages 6 months through 17 years being vaccinated against influenza, compared to 57% nationally. Lower rates are reflected in KIDSNET, as seen on Map 1, because some children are vaccinated by out-of-state providers who do not report to KIDSNET and others move out of state, but the move is not reported to KIDSNET. This may in part explain the low rates in the southeast and southwest areas of the state. The map of influenza vaccination coverage shows that children living in core cities (Central Falls, Pawtucket, Providence, Woonsocket) were among the least well vaccinated. Higher rates in surrounding communities make it unlikely that this can be explained by seeing out-of-state providers.

MAP 1. PERCENT OF CHILDREN AGES 6 MONTHS THROUGH 17 YEARS WHO WERE VACCINATED AGAINST INFLUENZA IN THE 2012-2103 INFLUENZA SEASON



Map notes: Includes children ages 6 months to < 18 years old as of August 1, 2012 with the most recent address in Rhode Island. Results are based on immunizations reported to KIDSNET by Rhode Island immunizers.

Source: KIDSNET, Rhode Island Department of Health, May 2014

Up-to-date immunization status among toddlers ages 19-35 months

Rhode Island leads the nation in childhood vaccination rates, yet disparities remain across racial, ethnic, and geographic lines. Although 59% of all children ages 19-35 months old were up-to-date according to data reported to KIDSNET, just under 55% of Hispanic and Black, non-Hispanic children were up-to-date, while 62% of White, non-Hispanic children were up-to-date. Up-to-date was defined as having completed the routine vaccination series for children through 36 months of age (at least four doses of Diphtheria, Tetanus, and Pertussis (DTaP), three doses of Polio, one dose of Measles, Mumps, and Rubella (MMR), three doses of Hepatitis B, three doses of Haemophilus Influenzae Type b (Hib), one dose of Varicella (chickenpox), and four doses of Pneumococcal vaccinations).

Immunization rates ranged widely by geography, from 50% of children who were up to date in Providence to 82% of children who were up to date in Exeter. (Little Compton and New Shoreham had too few children in the age range to make a meaningful comparison.) For core cities (Central Falls, Pawtucket, Providence, Woonsocket) where at least 25% of children live in poverty, the average was 55% of children who were up-to-date, compared to 62% for children living in non-core cities. There was considerable variation among the core cities, however, both by overall immunization rate and across racial and ethnic lines. (See Table 1.) In Providence, there was very little variation between White, Black, and Hispanic rates, which were all relatively low (near 50%). Pawtucket showed slightly more variation, with 61% of White, non-Hispanic children up-to-date on immunizations compared to 58% of Black, non-Hispanic children and 55% of Hispanic children. Central Falls had the reverse order, with 64% of Hispanic children, 56% of Black, non-Hispanic children, and 58% of White children being up-to-date. In Woonsocket, non-Hispanic Black children fared the best, with 74% up-to-date compared to 65% of White, non-Hispanic children and 59% of Hispanic children.

These data illustrate the need to continue to break down data into greater detail to understand differences at the local level. It is likely that neighborhood-level data would reveal more differences. Each community may face different challenges and have different strengths related to immunization. Access to primary care, transportation, insurance, and cultural factors all may play a role in immunization rates. Learning from communities that do well and supporting communities that struggle to achieve high immunization rates will help Rhode Island continue to achieve high rates of childhood immunization.

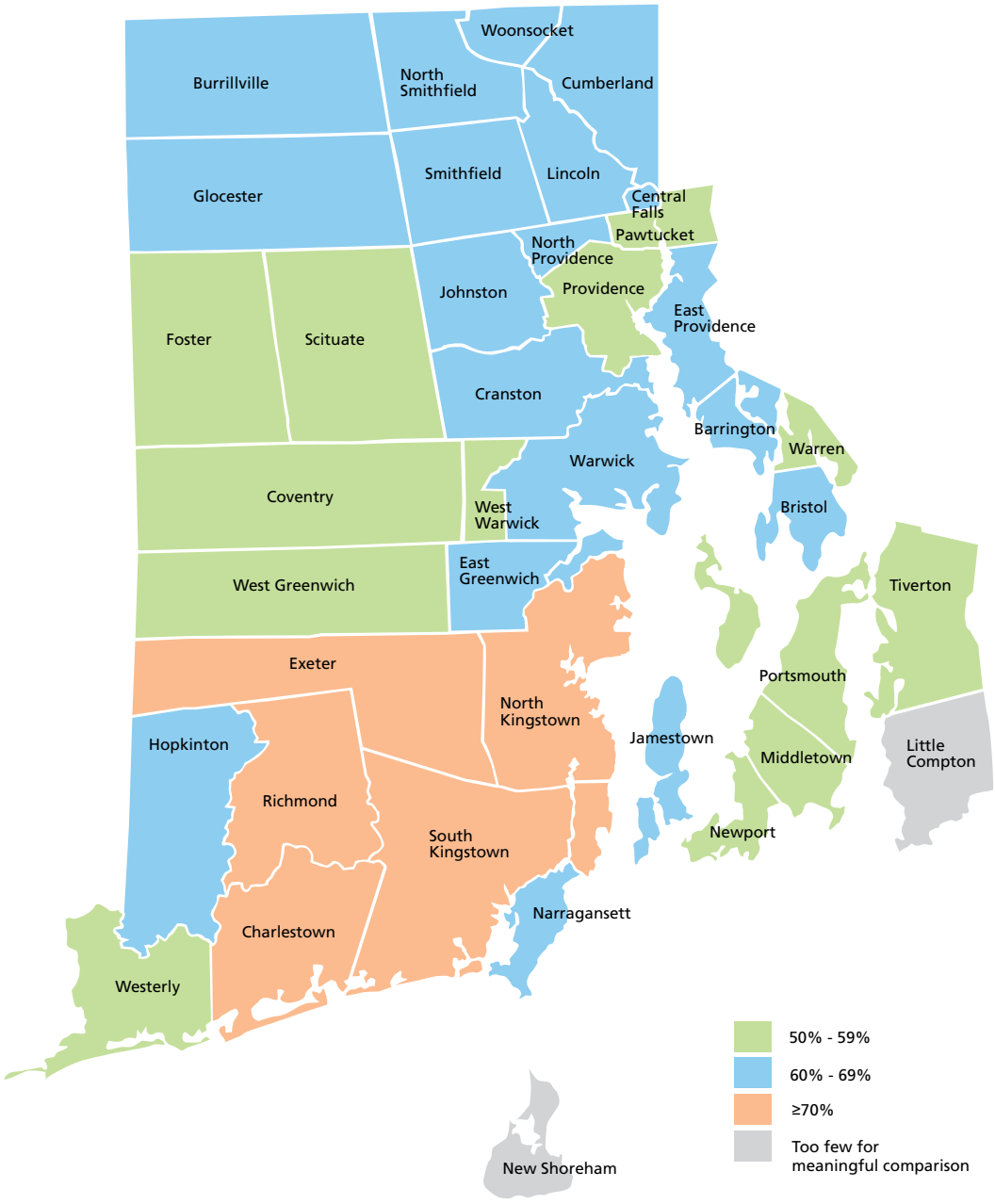
TABLE 1: PERCENT OF CHILDREN AGES 19-35 MONTHS WHO ARE UP-TO-DATE ON IMMUNIZATIONS

	All	White Non-Hispanic	Black Non-Hispanic	Hispanic
Barrington	64	63	*	*
Bristol	64	64	*	*
Burrillville	69	69	*	*
Central Falls	62	58	56	64
Charlestown	78	79	*	*
Coventry	55	55	*	*
Cranston	64	68	65	56
Cumberland	67	68	*	67
East Greenwich	66	68	*	*
East Providence	62	64	*	53
Exeter	82	85	*	*
Foster	57	61	*	*
Glocester	64	64	*	*
Hopkinton	63	63	*	*
Jamestown	68	68	*	*
Johnston	61	59	*	73
Lincoln	64	68	*	*
Little Compton	*	*	*	*
Middletown	57	58	*	59
Narragansett	69	68	*	*
New Shoreham	*	*	*	*
Newport	56	55	48	71
North Kingstown	72	71	*	71
North Providence	60	62	53	60
North Smithfield	62	63	*	*
Pawtucket	58	61	58	55
Portsmouth	54	52	*	*
Providence	50	52	50	51
Richmond	72	71	*	*
Scituate	56	56	*	*
Smithfield	64	64	*	*
South Kingstown	71	71	*	*
Tiverton	52	53	*	*
Warren	53	52	*	*
Warwick	62	63	*	65
West Greenwich	52	51	*	*
West Warwick	58	60	*	48
Westerly	51	52	*	*
Woonsocket	65	65	74	59
Overall	**59**	**62**	**55**	**55**

* Too few children for meaningful comparison of percentages (fewer than 20 children in the denominator)

Notes: Map and table data include children who were between 19 and 35 months old as of 12/31/2012 whose most recent address is in Rhode Island and who see a Rhode Island primary care physician. Results are based on immunizations reported to KIDSNET by Rhode Island immunizers. To be considered up to date, children must have completed the 4:3:1:3:3:1:4 immunization series, which includes at least four doses of Diphtheria, Tetanus, and Pertussis (DTaP), three doses of Polio, one dose of Measles, Mumps, and Rubella (MMR), three doses of Hepatitis B, three doses of Haemophilus Influenzae Type b (Hib), one dose of Varicella (chickenpox), and four doses of Pneumococcal vaccinations.

MAP 2. PERCENT OF TODDLERS AGES 19-35 MONTHS WHO ARE UP TO DATE ON THE ROUTINE IMMUNIZATION SERIES



Source: KIDSNET, Rhode Island Department of Health, May 2014

DTAP Immunization and lead screening status by second birthday

A child's medical home helps assure that children receive immunizations, lead screening and other preventive healthcare. By the time a child turns two years old, he or she should have completed the series of 4 DTaP (Diptheria, Tetanus, Pertussis) shots and been screened at least once for lead poisoning. Although many factors influence completion of preventive health services, having both immunization and lead screening on schedule is an indication of commitment by families and medical homes to complete recommended preventive health services. Furthermore, it reflects that any potential barriers to receiving those services have been overcome.

Statewide, 56% of children born in 2010 have had 4 DTaP shots and at least one lead screening documented in KIDSNET by their second birthday. As with influenza vaccination, two-year-old children living in core cities (Central Falls, Pawtucket, Providence, Woonsocket) were among the least likely to have completed the DTaP series and been screened for elevated blood lead levels. However, many communities in southeastern and northeastern Rhode Island and Westerly had comparable or lower completion rates. This can in part be attributed to incomplete data in border communities when children go to out-of-state or military health care providers that do not report to KIDSNET, as well as to a higher likelihood of moving out of state among Navy families living in southeastern Rhode Island. The percentages ranged from 34% in Tiverton, a community near the Navy base, to 78% in Exeter.

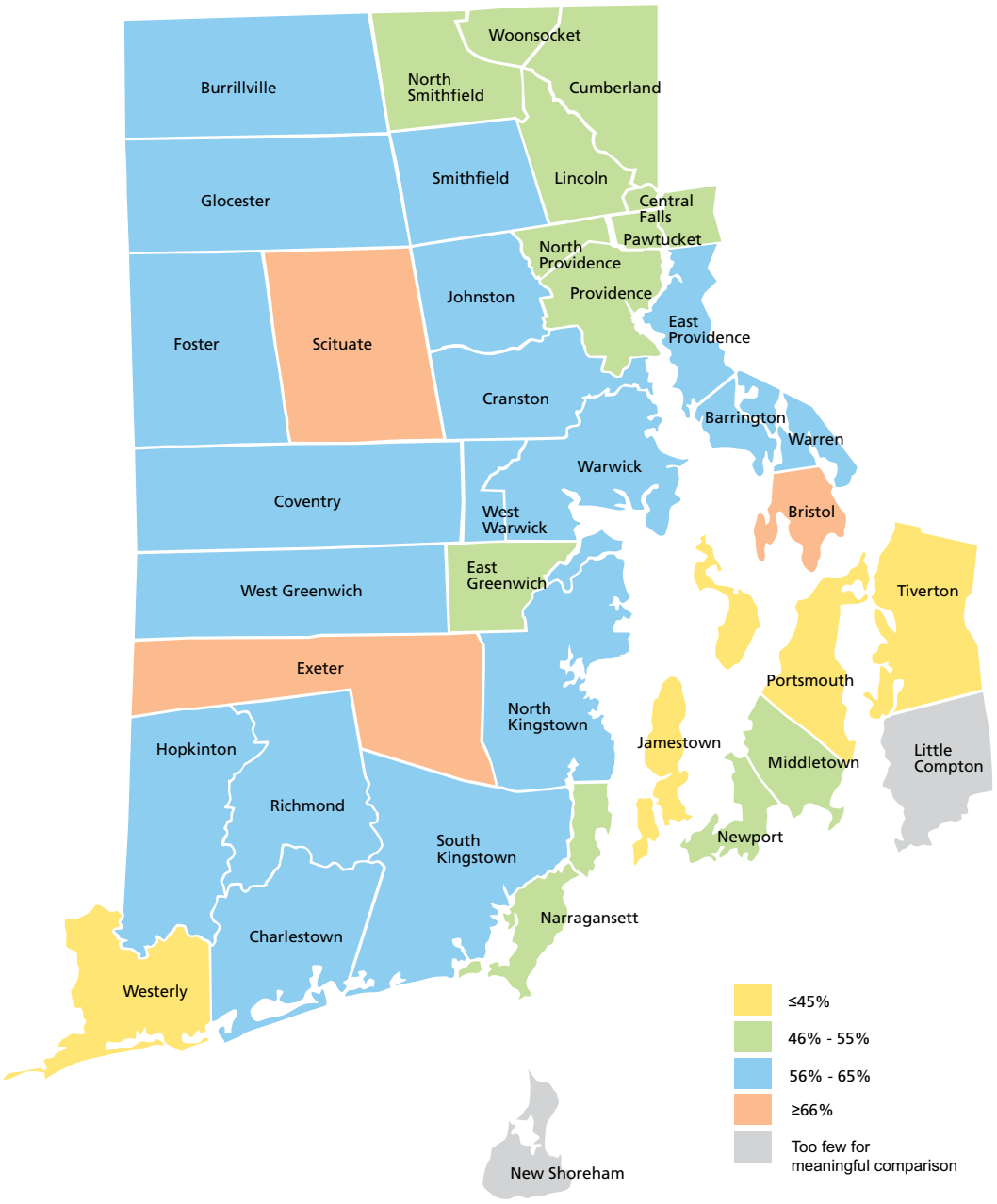
Table 2 shows the percentage of children who completed both 4 DTaP vaccine doses and a lead screening by age two, as well as the percentages who had no shots or lead screening, and only one or the other. There may be barriers to care in communities with high percentages of children who only completed the DTaP series or a lead screening, but not both, by their second birthday. For example, it is easier for parents when lead screening and immunization are available in the same building as the medical home than it is when they must take a lab slip to an outside laboratory to complete the lead screening. It is most concerning when there is no evidence of either immunization or lead screening for a child, although some percentage of those children have likely moved out of Rhode Island.

TABLE 2: PERCENT OF TWO YEAR OLDS WHO RECEIVED LEAD SCREENING AND 4 DOSES OF DTAP VACCINE

NAME	Percent No DTaP, No Lead Screen	Percent No DTaP, Yes Lead Screen	Percent Yes DTaP, No Lead Screen	Percent Yes DTaP, Yes Lead Screen	# of children born in 2010
Barrington	9.8	18.2	9.1	62.9	143
Bristol	8.9	18.9	4.7	67.5	169
Burrillville	14.2	9.4	18.9	57.5	106
Central Falls	20.2	18.8	10	51	351
Charlestown	10.2	12.2	20.4	57.1	49
Coventry	9.1	14.6	12.5	63.8	287
Cranston	10.2	16.3	12.3	61.2	742
Cumberland	10.2	21.1	16.1	52.6	323
East Greenwich	8.6	18.1	18.1	55.2	105
East Providence	12.3	18.8	4.9	64	511
Exeter	7.8	11.8	2	78.4	51
Foster	19	0	19	61.9	21
Glocester	6.1	16.7	15.2	62.1	66
Hopkinton	12.3	16.9	6.2	64.6	65
Jamestown	34.5	10.3	13.8	41.4	29
Johnston	12.2	19.3	9.2	59.2	238
Lincoln	16.9	15.7	12.7	54.8	166
Little Compton*	*	*	*	*	*
Middletown	36.9	13.4	3.2	46.5	187
Narragansett	13.5	6.8	24.3	55.4	74
New Shoreham*	*	*	*	*	*
Newport	28.9	18.8	2.7	49.7	298
North Kingstown	14.4	8.8	14.9	61.9	194
North Providence	16.3	14.8	14.4	54.4	263
North Smithfield	14.9	13.4	19.4	52.2	67
Pawtucket	17.4	22.4	8.9	51.3	942
Portsmouth	31.6	18.1	7.7	42.6	155
Providence	18	22.7	6.3	53.1	2571
Richmond	10.8	9.2	20	60	65
Scituate	9.4	13.2	7.5	69.8	53
Smithfield	7.6	19.8	12.2	60.3	131
South Kingstown	11.7	14	16.8	57.5	179
Tiverton	19.8	42.1	4.1	33.9	121
Warren	13.3	22.4	5.1	59.2	98
Warwick	11.2	13	12.5	63.3	801
West Greenwich	19.3	10.5	8.8	61.4	57
West Warwick	12.8	13.1	11.9	62.2	320
Westerly	23	23.5	10.7	42.9	196
Woonsocket	14	20	16.1	49.8	570
Overall	**15.2**	**18.7**	**10.0**	**55.7**	**10,787**

* Too few children for meaningful comparison of percentages (fewer than 20 children in the denominator)

MAP 3. PERCENT OF TWO YEAR OLDS WHO RECEIVED LEAD SCREENING AND 4 DOSES OF DTAP VACCINE



Notes: Map and table data include children born in 2010 with the most recent address in Rhode Island. Results are based on immunizations reported to KIDSNET by Rhode Island immunizers and lead screening results reported from the Rhode Island Department of Health Lead Elimination Surveillance System. DTaP stands for Diphtheria, Tetanus, and Pertussis.

Source: KIDSNET, Rhode Island Department of Health, May 2014

Discontinuation in WIC participation after 1 year of age

The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) provides nutrition education to promote optimal growth and development in children younger than the age of six. The program provides an array of services including breastfeeding support and promotion, referrals to needed medical and social services in the community, and assessment of client nutritional status. WIC also provides checks for healthy foods based on the nutritional needs of the child. Although WIC promotes breastfeeding, WIC benefits can be used to purchase formula until the child's first birthday. Some families choose to stop receiving WIC services after the first birthday when the expense of formula is no longer relevant. Those children do not benefit from the nutritional education and other supports provided by WIC.

Map 4 and Table 3 show the percentage of children born in 2010 who received WIC services but then stopped receiving them after the child turned one year old. Several towns did not have enough children originally enrolled in WIC (at least 20) to make meaningful comparisons. However, unlike with vaccinations, children living in the core cities (Central Falls, Pawtucket, Providence, Woonsocket) were more likely to continue to benefit from WIC services after age one. Only 11% of children living in a core city dropped out of WIC after turning one year old, compared to 18% of those living outside of core cities. Communities that continue to engage families in WIC after the first birthday may be able to provide insight into strategies for retention. Children of non-English speaking families and those born to a mother younger than the age of 18 were also more likely than the general population to stay in WIC beyond the first birthday. Seventy-five of 738 (10%) non-English speakers and 20 of 232 (9%) with a mother under age 18 discontinued WIC after turning one year old compared to 14% overall.

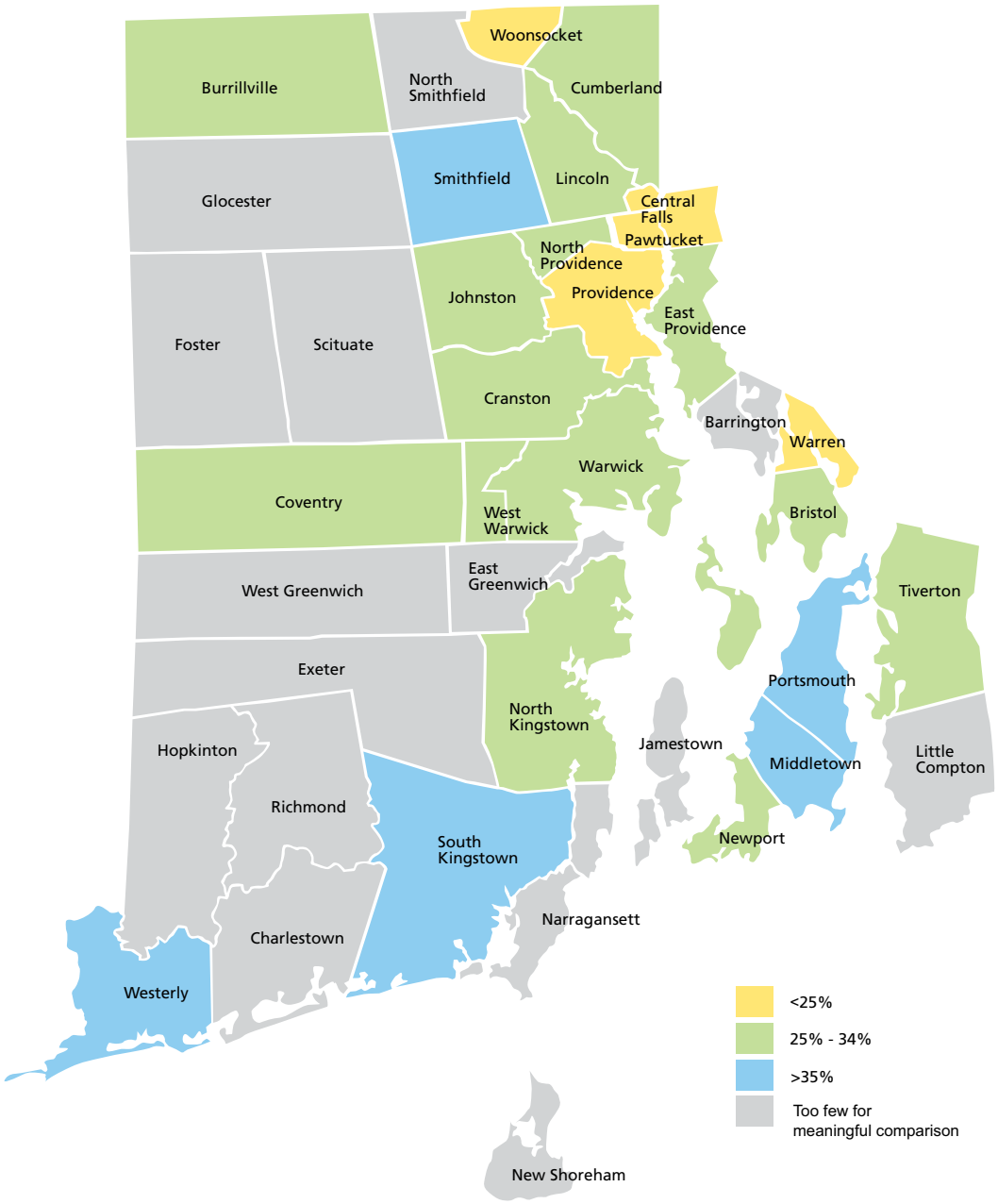
TABLE 3: PERCENT OF WIC PARTICIPANTS WHO DISCONTINUED AT OR BEFORE FIRST BIRTHDAY

	Percent
Barrington	*
Bristol	23%
Burrillville	12%
Central Falls	8%
Charlestown	*
Coventry	16%
Cranston	17%
Cumberland	17%
East Greenwich	*
East Providence	15%
Exeter	*
Foster	*
Glocester	*
Hopkinton	*
Jamestown	*
Johnston	9%
Lincoln	23%
Little Compton	*
Middletown	21%
Narragansett	*
New Shoreham	*
Newport	14%
North Kingstown	14%
North Providence	21%
North Smithfield	9 %
Pawtucket	13%
Portsmouth	27%
Providence	11%
Richmond	*
Scituate	*
Smithfield	36%
South Kingstown	33%
Tiverton	24%
Warren	18%
Warwick	18%
West Greenwich	*
West Warwick	16%
Westerly	25%
Woonsocket	8 %
Overall	**14%**

AVERAGE: Core Cities 11% Non-Core Cities 18%

* Too few children for meaningful comparison of percentages (fewer than 20 children in the denominator)

MAP 4. PERCENT OF CHILDREN NOT RE-ENROLLED IN WIC AFTER FIRST BIRTHDAY



Notes: Map and table data include children born in 2010 who were enrolled in WIC before their first birthday and who had the most recent address in Rhode Island.

Source: KIDSNET, Rhode Island Department of Health, February 2015

Eligible families not receiving Family Visiting services

Children born in Rhode Island with certain risk factors are offered a family visit from the First Connections Program if they are not enrolled in other public health family visiting programs. Trained nurses, social workers, and community health workers meet with families in their homes or communities to talk about their needs, answer questions they may have, and conduct comprehensive assessments. Family visits are based on the needs of the family. Visit topics may include health education and connections with appropriate healthcare services (including connection with a medical home), social services, and other community resources.

Reasons for not visiting a family are varied and include the family declining services, and the family visitors being unable to locate or contact the family. Concern has been raised in the past that the easier-to-locate suburban families may be more likely to be visited than those in cities. These data do not support that theory. Overall, 61% of eligible families born in 2010 and living in a core city received at least one visit, while only 49% of eligible non-core city dwellers received a visit. Similar percentages hold true for eligible families receiving public insurance (Medicaid), with 63% of these families in the core cities receiving a visit and 46% of these families living outside of the core cities receiving a visit. The percentages of eligible families of premature infants who were visited were higher at 64% in core cities and 60% in non-core cities. An exploration of the different rates of visitation for prematurity compared to insurance status or other social factors may illuminate some reasons for these differences.

It is also interesting to note the variation even among the core cities. Central Falls, Pawtucket, and Providence have among the highest rates of visitation for eligible families in the state, while Woonsocket rates are considerably lower, closer to rates found in surrounding communities.

TABLE 4: PERCENT OF ELIGIBLE FAMILIES WITH NO FAMILY VISIT BY CITY/TOWN

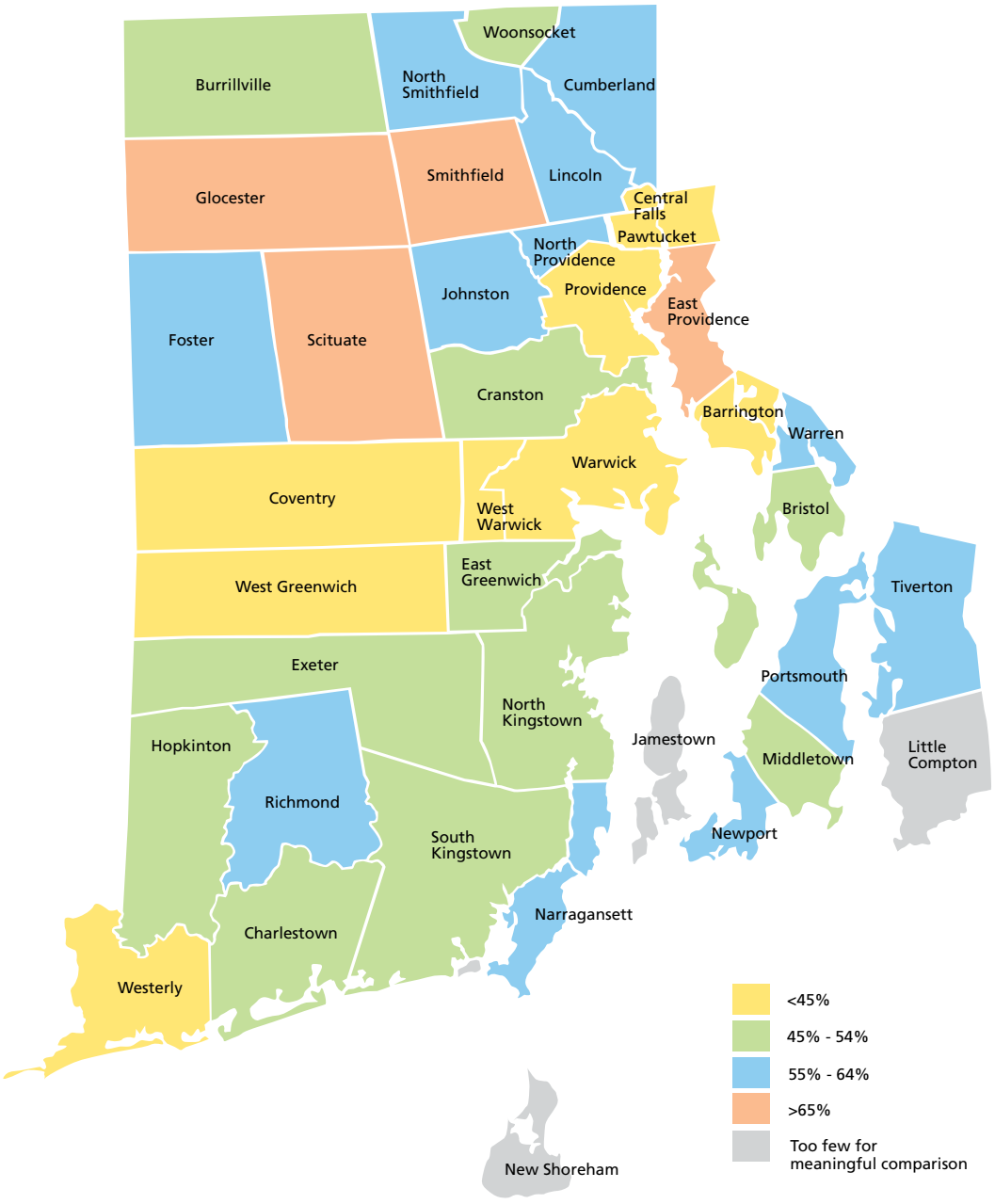
	Percent of eligible families with no visit	Percent of premature infants with no visit	Percent of publicly-insured families with no visit
Barrington	40	*	*
Bristol	54	*	55
Burrillville	53	*	57
Central Falls	33	19	34
Charlestown	45	*	*
Coventry	42	22	48
Cranston	45	23	45
Cumberland	57	60	58
East Greenwich	52	*	65
East Providence	66	64	70
Exeter	48	*	*
Foster	60	*	*
Glocester	68	*	*
Hopkinton	50	*	*
Jamestown	*	*	*
Johnston	58	50	57
Lincoln	60	50	65
Little Compton	*	*	*
Middletown	53	*	65
Narragansett	59	*	59
New Shoreham	*	*	*
Newport	60	39	62
North Kingstown	46	39	52
North Providence	58	57	55
North Smithfield	59	*	*
Pawtucket	39	33	37
Portsmouth	56	*	*
Providence	36	36	35
Richmond	62	*	*
Scituate	69	*	*
Smithfield	67	*	65
South Kingstown	52	*	42
Tiverton	61	*	68
Warren	60	*	68
Warwick	42	35	45
West Greenwich	18	*	*
West Warwick	40	26	42
Westerly	39	43	38
Woonsocket	52	48	52
Overall	**45**	**38**	**44**
Core Cities	39	36	37
Non-Core Cities	51	40	54

Notes: Map and table data include Rhode Island resident children born in Rhode Island in 2010.

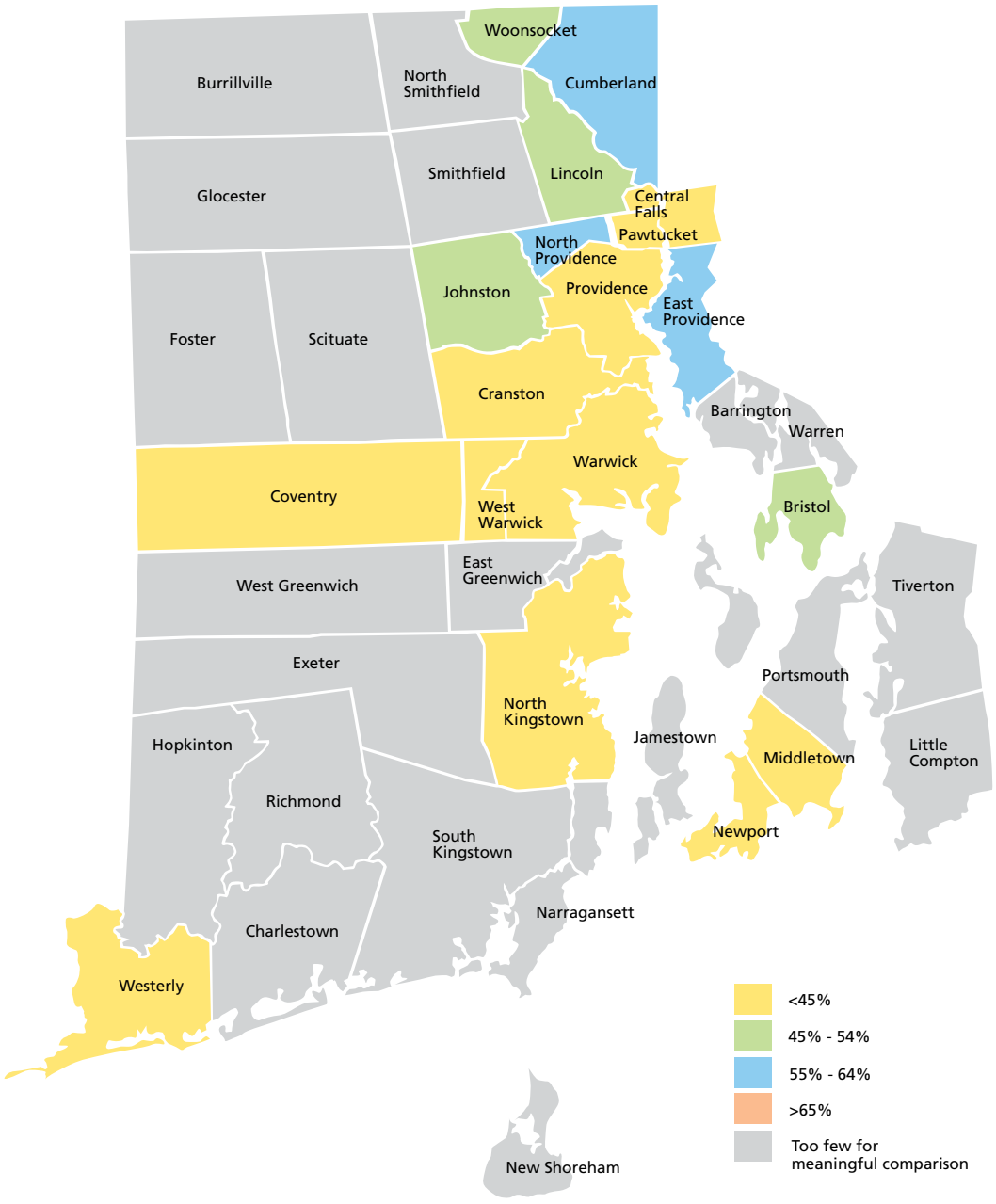
Source: KIDSNET, Rhode Island Department of Health

* Too few children for meaningful comparison of percentages (fewer than 20 children in the denominator)

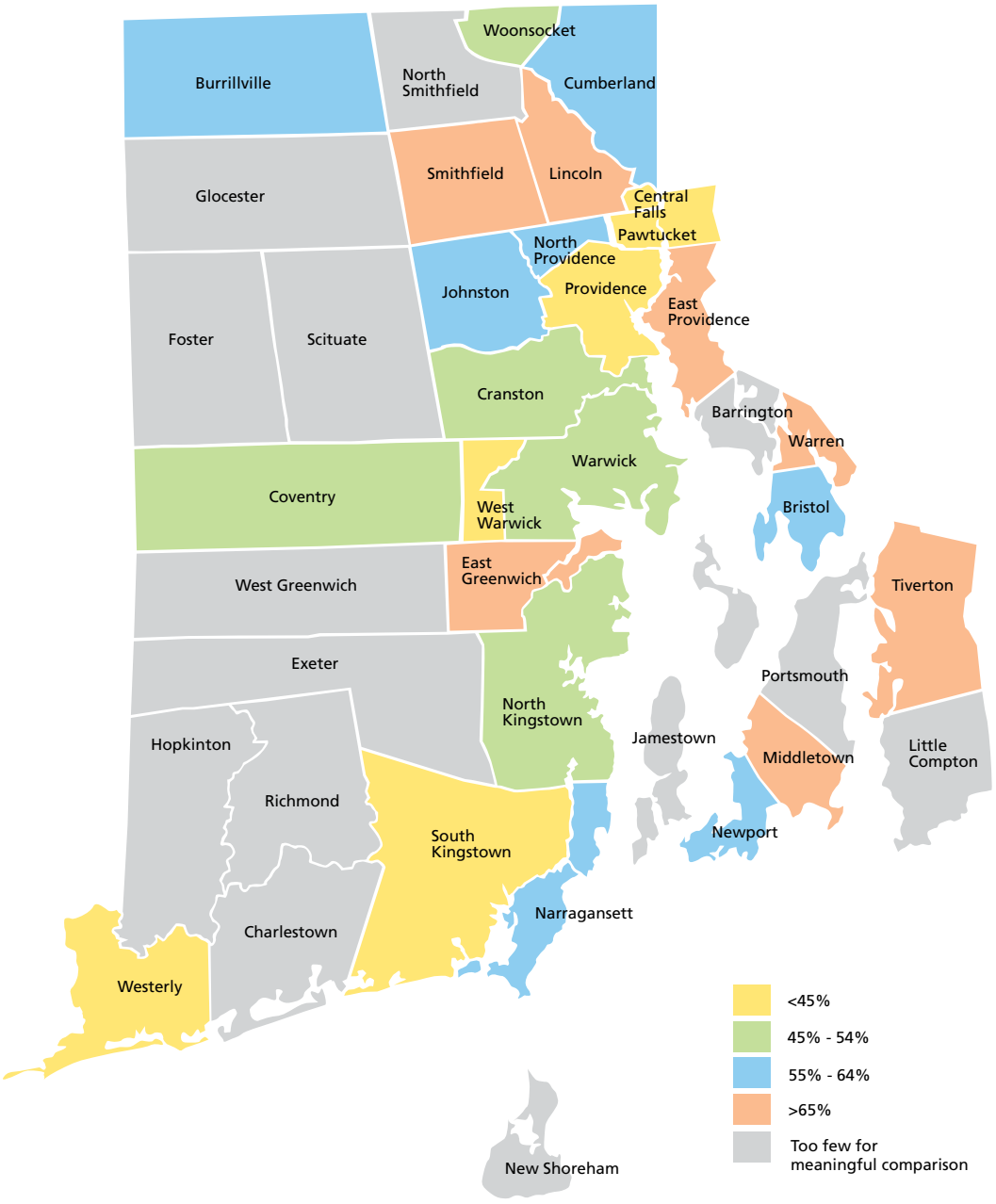
MAP 5-1. PERCENT OF ELIGIBLE FAMILIES NOT RECEIVING AT LEAST ONE FAMILY VISIT



MAP 5-2. PERCENT OF ELIGIBLE FAMILIES OF PREMATURE INFANTS NOT RECEIVING AT LEAST ONE FAMILY VISIT



MAP 5-3. PERCENT OF ELIGIBLE FAMILIES WITH PUBLIC INSURANCE NOT RECEIVING AT LEAST ONE FAMILY VISIT



Up-to-date Immunization Status among WIC clients vs. children not in WIC

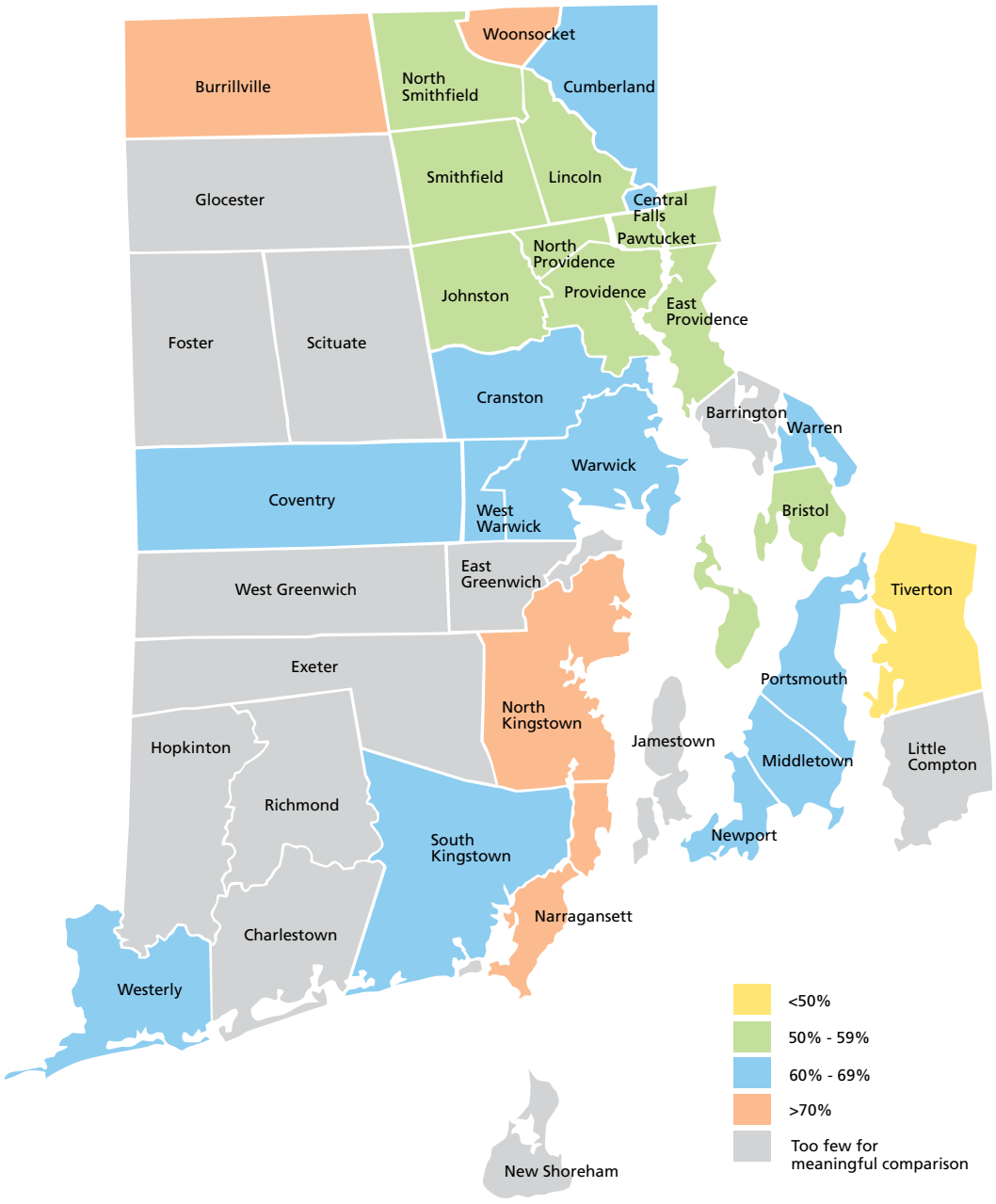
In addition to nutritional education, the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) refers families to needed healthcare services and primary care providers. WIC staff members have access to KIDSNET to check if any vaccines are due or past due. Overall among children born in 2010, WIC clients were as well vaccinated as children not enrolled in WIC when comparing completion rates for the routine immunization series for children through 36 months (at least 4 DTaP: 3 Polio: 1 MMR: 3 Hepatitis B: 3 HIB: 1 Varicella: 4 Pneumococcal vaccinations). Since WIC has income-based eligibility, this suggests that the lower-income population served by WIC is as well vaccinated as peers who are not enrolled in WIC. That group includes higher-income families who may have fewer barriers to vaccination, but it may also include children who have moved out of state or who see an out-of-state healthcare provider, resulting in under-reporting of vaccinations in KIDSNET. In the core cities, where nearly half of all WIC clients live, WIC clients were found to have better vaccination coverage (56%) than city residents who were not enrolled in WIC (47%). The differences were most dramatic in Woonsocket (71% for WIC, 52% for Non-WIC) and Central Falls (61% for WIC, 34% for non-WIC). Although overall statewide rates were comparable, whether or not WIC clients had similar, lower, or higher rates of children who have completed the routine vaccination series varied from town to town; reasons for these differences could be explored at the town or neighborhood level.

TABLE 5: PERCENT OF WIC CLIENTS VS. CHILDREN NOT IN WIC WHO ARE UP TO DATE ON IMMUNIZATIONS

	# up-to-date Non-WIC	Total Non-WIC	Percent of children not in WIC up-to-date	# up-to-date WIC	Total WIC	Percent of WIC clients up-to-date
Barrington	86	132	65%	*	*	*
Bristol	80	117	68%	29	53	55%
Burrillville	47	73	64%	29	34	85%
Central Falls	11	32	34%	201	327	61%
Charlestown	26	36	72%	*	*	*
Coventry	120	200	60%	53	88	60%
Cranston	284	430	66%	208	323	64%
Cumberland	148	242	61%	53	86	62%
East Greenwich	62	96	65%	*	*	*
East Providence	175	272	64%	135	244	55%
Exeter	29	37	78%	*	*	*
Foster	*	*	*	*	*	*
Glocester	28	48	58%	*	*	*
Hopkinton	29	42	69%	*	*	*
Jamestown	12	26	46%	*	*	*
Johnston	88	137	64%	56	101	55%
Lincoln	74	119	62%	25	47	53%
Little Compton	*	*	*	*	*	*
Middletown	47	146	32%	40	65	62%
Narragansett	35	53	66%	18	23	78%
New Shoreham	*	*	*	*	*	*
Newport	50	158	32%	91	141	65%
North Kingstown	102	147	69%	38	50	76%
North Providence	98	153	64%	59	110	54%
North Smithfield	25	36	69%	17	31	55%
Pawtucket	159	318	50%	376	645	58%
Portsmouth	49	115	43%	23	37	62%
Providence	310	675	46%	994	1955	51%
Richmond	42	53	79%	*	*	*
Scituate	26	39	67%	*	*	*
Smithfield	76	108	70%	13	22	59%
South Kingstown	91	129	71%	34	51	67%
Tiverton	28	79	35%	15	43	35%
Warren	29	55	53%	29	44	66%
Warwick	336	549	61%	180	266	68%
West Greenwich	22	46	48%	*	*	*
West Warwick	93	150	62%	111	175	63%
Westerly	61	121	50%	49	79	62%
Woonsocket	81	157	52%	311	436	71%
Overall			**57%**			**58%**

* Too few children for meaningful comparison of percentages (fewer than 20 children in the denominator)

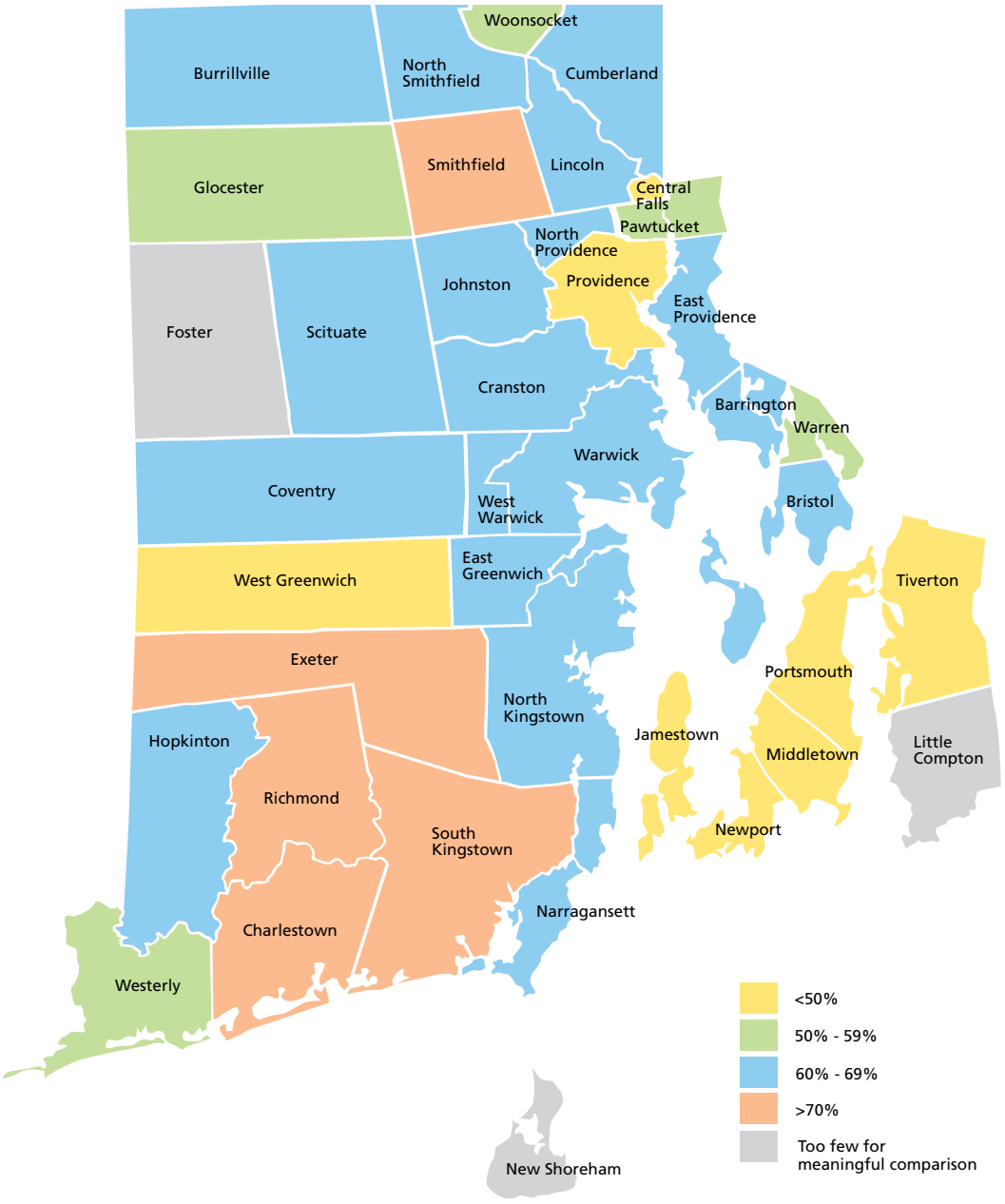
MAP 6A. PERCENT OF CHILDREN BORN IN 2010 WHO ARE UP TO DATE ON THE ROUTINE IMMUNIZATION SERIES – ENROLLED IN WIC



Notes: Map and table data include children born in 2010 who have the most recent address in Rhode Island. Results are based on immunizations reported to KIDSNET by Rhode Island immunizers. To be considered up to date, children must have completed the 4:3:1:3:3:1:4 immunization series, which includes at least four doses of Diphtheria, Tetanus, and Pertussis (DTaP), three doses of Polio, one dose of Measles, Mumps, and Rubella (MMR), three doses of Hepatitis B, three doses of Haemophilus Influenzae Type b (Hib), one dose of Varicella (chickenpox), and four doses of Pneumococcal vaccinations.

Source: KIDSNET, Rhode Island Department of Health, May 2014

MAP 6B. PERCENT OF CHILDREN BORN IN 2010 WHO ARE UP TO DATE ON THE ROUTINE IMMUNIZATION SERIES – NOT ENROLLED IN WIC



Notes: Map and table data include children born in 2010 who have the most recent address in Rhode Island. Results are based on immunizations reported to KIDSNET by Rhode Island immunizers. To be considered up to date, children must have completed the 4:3:1:3:3:1:4 immunization series, which includes at least four doses of Diphtheria, Tetanus, and Pertussis (DTaP), three doses of Polio, one dose of Measles, Mumps, and Rubella (MMR), three doses of Hepatitis B, three doses of Haemophilus Influenzae Type b (Hib), one dose of Varicella (chickenpox), and four doses of Pneumococcal vaccinations.

Source: KIDSNET, Rhode Island Department of Health, May 2014

Increase in elevated blood lead levels resulting from redefinition of lead reference level to 5 µg/dL

Based on a growing body of scientific evidence showing that even low blood lead levels can cause adverse health effects, in 2010 the Centers for Disease Control and Prevention (CDC) defined a reference level of 5 micrograms per deciliter (µg/dL) to identify children with elevated lead levels. These children are exposed to more lead than most children.[1] Although medical treatment with chelation therapy is still not recommended until blood lead levels reach 45 µg/dL, starting in 2012 the level for concern was lowered from 10 to 5 µg/dL. By identifying a reference level, potential sources of lead can be identified and eliminated early to prevent further rise in blood lead levels. For programs that work with families to eliminate lead hazards, there were implications to lowering the threshold, because the number of families eligible for services rose considerably.

Statewide, among children eligible for kindergarten in 2014, the number of children with a blood lead level above the reference level increased four-fold under the new, lower cutoff, and the percent rose from 2% to 11%. Variation occurred by city/town. For example, the number of children above the reference level in South Kingstown increased from 0 using the old reference level to 17 using the new reference level, while in North Smithfield, the number only increased from 0 to 4. The reasons for large increases in the percentage of children with blood lead levels of concern are unknown but may be an indication of increased sources of lead exposure in certain geographical areas.

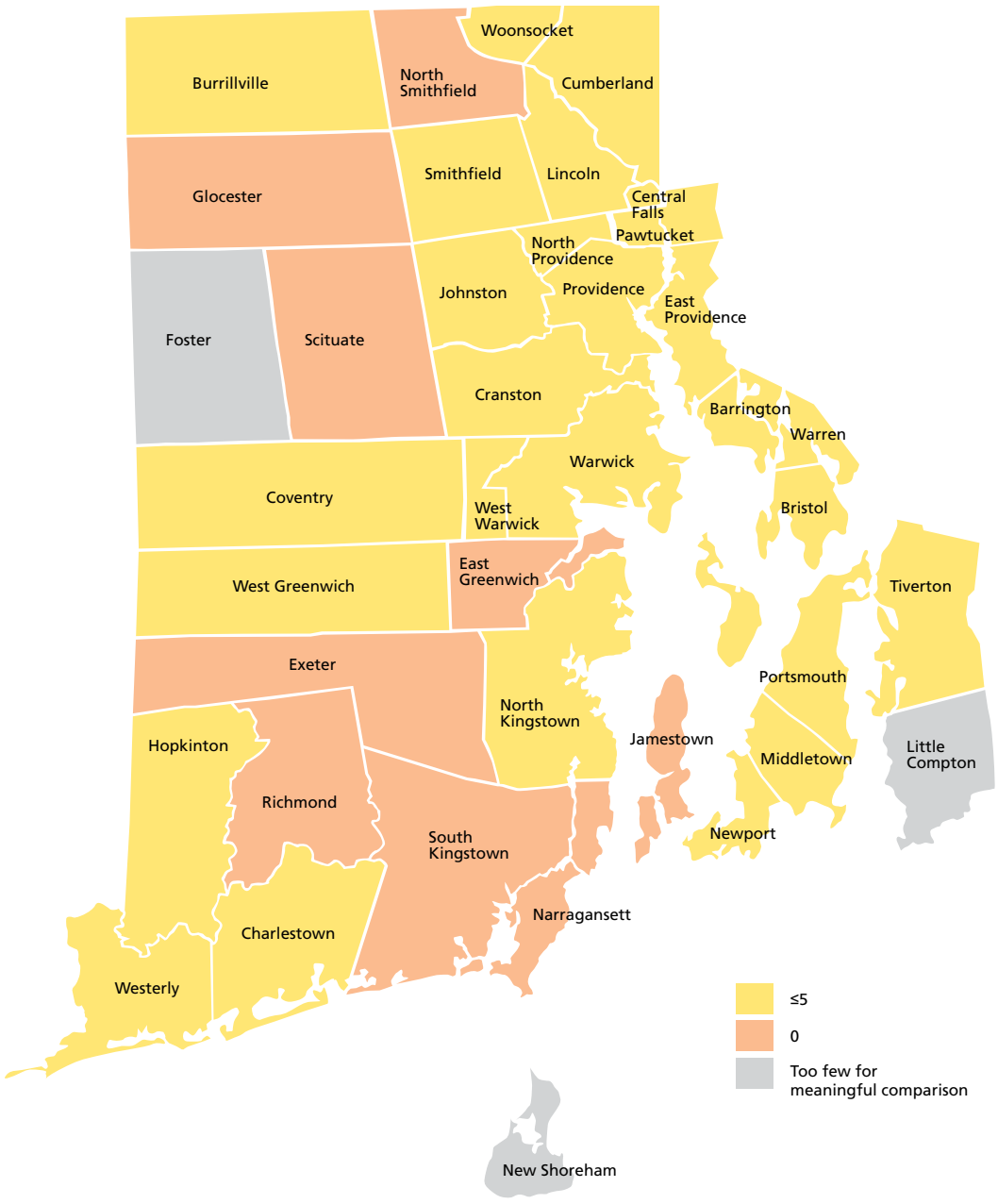
[1]CDC Healthy Homes and Lead Poisoning Prevention Program, Standard Surveillance Definitions

TABLE 6. COMPARISON OF ELEVATED BLOOD LEAD LEVELS USING OLD AND NEW REFERENCE LEVELS BY CITY/TOWN

	Number elevated lead OLD definition	Number elevated lead NEW definition	Number with no elevated lead	Total number of children	Percent elevated lead OLD definition	Percent elevated lead NEW definition	Percent with no elevated lead
Barrington	4	10	121	135	3%	7%	90%
Bristol	2	13	125	140	1%	9%	89%
Burrillville	1	8	98	107	1%	7%	92%
Central Falls	8	47	227	282	3%	17%	80%
Charlestown	2	4	35	41	5%	10%	85%
Coventry	3	7	275	285	1%	2%	96%
Cranston	17	72	631	720	2%	10%	88%
Cumberland	3	17	273	293	1%	6%	93%
East Greenwich	0	6	113	119	0%	5%	95%
East Providence	13	72	387	472	3%	15%	82%
Exeter	0	0	42	42	0%	0%	100%
Foster	*	*	*	*	*	*	*
Glocester	0	5	67	72	0%	7%	93%
Hopkinton	1	7	47	55	2%	13%	85%
Jamestown	0	0	26	26	0%	0%	100%
Johnston	2	25	230	257	1%	10%	89%
Lincoln	1	13	144	158	1%	8%	91%
Little Compton	*	*	*	*	*	*	*
Middletown	3	12	137	152	2%	8%	90%
Narragansett	0	3	52	55	0%	5%	95%
New Shoreham	*	*	*	*	*	*	*
Newport	11	44	190	245	4%	18%	78%
North Kingstown	2	12	187	201	1%	6%	93%
North Providence	3	20	241	264	1%	8%	91%
North Smithfield	0	4	72	76	0%	5%	95%
Pawtucket	28	92	743	863	3%	11%	86%
Portsmouth	2	11	120	133	2%	8%	90%
Providence	107	395	1881	2383	4%	17%	79%
Richmond	0	3	47	50	0%	6%	94%
Scituate	0	4	47	51	0%	8%	92%
Smithfield	2	5	108	115	2%	4%	94%
South Kingstown	0	17	145	162	0%	10%	90%
Tiverton	3	10	98	111	3%	9%	88%
Warren	2	13	78	93	2%	14%	84%
Warwick	4	37	634	675	1%	5%	94%
West Greenwich	1	1	49	51	2%	2%	96%
West Warwick	6	28	252	286	2%	10%	88%
Westerly	1	17	161	179	1%	9%	90%
Woonsocket	11	45	497	553	2%	8%	90%
TOTAL	**243**	**1089**	**8617**	**9949**	**2%**	**11%**	**87%**

* Too few children for meaningful comparison of percentages (fewer than 20 children in the denominator)

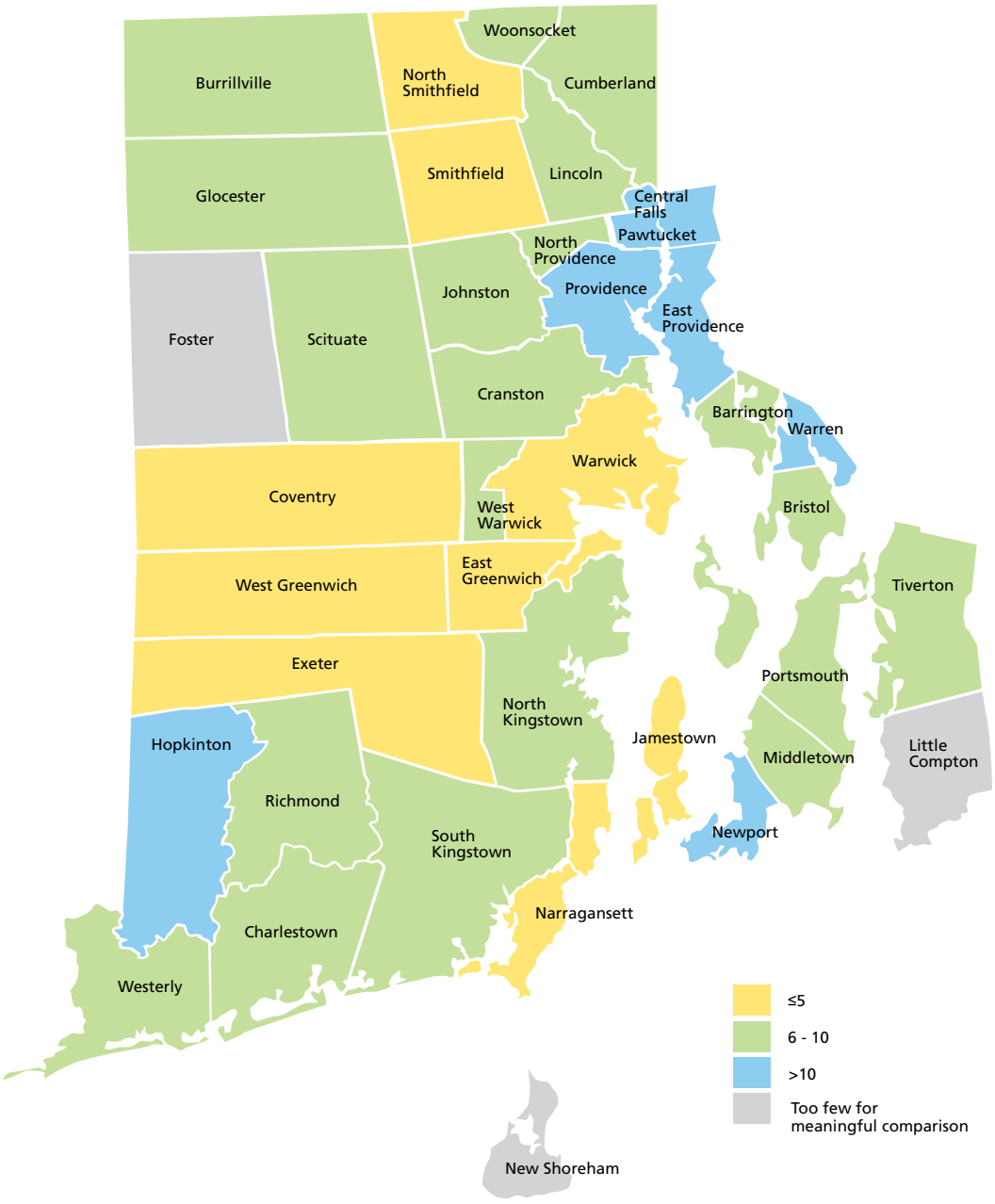
MAP 7A. PERCENT OF CHILDREN EVER HAVING A BLOOD LEAD LEVEL > 10 µG/DL



Notes: Table and map data include children born between 9/1/2008 and 8/31/2009. These children were eligible to start kindergarten in 2014. Results are based on the highest lead screening result for each child reported from the Rhode Island Department of Health Lead Elimination Surveillance System.

Source: KIDSNET, Rhode Island Department of Health, May 2014

MAP 7B. PERCENT OF CHILDREN EVER HAVING A BLOOD LEAD LEVEL > 5 µG/DL



Notes: Table and map data include children born between 9/1/2008 and 8/31/2009. These children were eligible to start kindergarten in 2014. Results are based on the highest lead screening result for each child reported from the Rhode Island Department of Health Lead Elimination Surveillance System.

Source: KIDSNET, Rhode Island Department of Health, May 2014

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