PARENTS' IMMUNIZATION HESITANCIES IN MAINE AND SOCIAL MARKETING STRATEGIES TO OVERCOME THEM

FORMATIVE RESEARCH SUMMARY REPORT

For the Maine Immunization Program,
Maine Center for Disease Control and Prevention,
Maine Department of Health and Human Services

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ABSTRACT

Despite the importance of childhood immunizations to the public's health, Maine, along with many other states across the country, has seen an increased number of parents choosing to exempt their children from recommended immunizations in recent years. To determine the best outreach strategies for these parents, Maine survey data were reviewed and re-analyzed, new surveys were conducted, and innovative approaches to immunization education were explored. This report summarizes findings from categorizing Maine parents' vaccine concerns and characterizing these parents' geographical distribution at the sub-county level; identifies messages to motivate these parents toward belief and behavior changes; and provides targeted outreach strategies for immunization promotion to different audiences in different areas of Maine.

INTRODUCTION

TABLE 1. PERCENTAGE OF IMMUNIZATION EXEMPTIONS AMONG MAINE KINDERGARTENERS BY TYPE AND SCHOOL YEAR

SCHOOL YEAR	MEDICAL EXEMPTION	RELIGIOUS EXEMPTION	PHILOSOPHICAL EXEMPTION
2004-2005	0.38%	0.06%	2.65%
2005-2006	0.40%	0.06%	2.26%
2006-2007	0.46%	0.11%	2.77%
2007-2008	0.43%	0.12%	3.49%
2008-2009	0.36%	0.10%	2.87%
2009-2010	0.37%	0.07%	3.12%

Despite immunization being identified as one of the ten great public health achievements in the past century,[1,2] some parents are hesitant to let their children receive recommended immunizations according to the recommended schedule. A recent national study showed that more than 28% of parents have allowed their child to be immunized while being doubtful that it was the correct thing to do (9%), while delaying a vaccine (13%), or while refusing a vaccine (6%).[3] In Maine, annual school immunization surveys show that while medical and religious exemptions have remained relatively stable, the percentage of philosophical exemptions has been slowly increasing among kindergartners (Table 1).[4]

Further investigation of these exemptions indicated that they were not focused in certain geographical areas of Maine, but rather quite broadly scattered throughout the state. In order to address this challenge the Maine Immunization Program (MIP), Maine Center for Disease Control and Prevention (ME CDC) contracted with Policy Studies, Inc. (PSI), a public health service company with expertise in social marketing, for a joint project. The goals of this project were to: (1) analysis and categorize rationales for parents' immunization hesitancy; (2) characterize immunization-hesitant parents geographically at the sub-county level using population analysis tools; and (3) develop target audience specific outreach and education strategies for

immunization-hesitant parents in different areas of Maine. This project included qualitative analysis of findings from a previous Maine immunization survey, intercept interviews among Maine parents with young children, and analysis of existing social and economic data about Maine families. Using information collected from these sources, the research team for this project recommended new ways to promote immunization among Maine parents with young children. This report presents the results of this project.

QUALITATIVE ANALYSIS OF MAINE EARLY CHILDHOOD IMMUNIZATION SURVEY REPORT (2008)

In 2007, MIP, ME CDC, and the Muskie School of Public Service, University of Southern Maine conducted a mail and phone survey among Maine parents to identify barriers and incentives for immunizing pre-school children. Survey results were reported as the Maine Early Childhood Immunization Survey Report, published in March 2008. The survey population of 8,526 parents was randomly sampled among 61,377 births throughout Maine over a five-year period. Of the 2,653 parents who responded to the survey, 273 (10.3%) indicated that they were immunization-hesitant parents who had one or more children who were not immunized or had some immunizations but were not up-to-date on the recommended immunization schedule (referred to subsequently in that report as the "NotAll" group).

An initial review of the 2008 report revealed that the majority of the NotAll group agreed with immunization value statements in the survey, such as the health protection afforded by childhood immunization, the value of physician recommendations about immunization, and the risks of vaccine-preventable childhood diseases. However, the NotAll group had lower levels of agreement for all statements as compared to the fully immunized group. The research team for this project saw this lower level of agreement among the NotAll group as an indicator of potential immunization hesitancy, and then sought to identify and categorize the reasons for this potential hesitancy using data from the 2008 report.

One question in the 2008 survey asked parents why they did not vaccinate their children in accordance with the recommended schedule. This question provided pre-defined response statements, as well as "another reason" option, for parents to select. Seventy-three of the respondents in the NotAll group (26.7%) selected the "another reason" option, either exclusively

or in addition to selecting one or more pre-defined responses (survey respondents were allowed to select more than one statement). The research team elected to conduct a qualitative analysis of parents' responses to this question—both pre-defined and "another reason" responses—as a basis for categorizing parents' different rationales for immunization hesitancy.

Table 2 includes pre-defined responses to this survey question and the percentage of NotAll group respondents who selected each statement.

TABLE 2. PERCENTAGE OF NOTALL GROUP RESPONDENTS WHO SELECTED EACH PRE-DEFINED REASON FOR NOT TAKING SOME OR ALL OF THEIR CHILDREN FOR SHOTS

REASON	PERCENTAGE
THE NUMBER OF SHOTS GIVEN AT ONE TIME BOTHERS ME	52.8%
I'M AFRAID MY CHILD(REN) WILL BECOME AUTISTIC	34.2%
I THINK PRESCHOOL SHOTS FOR CHILDREN CAN CAUSE ILLNESS INSTEAD OF PREVENTING IT	23.4%
I THINK PRESCHOOL SHOTS FOR CHILDREN ARE UNNECESSARY	15.2%
FOR RELIGIOUS REASONS	6.7%
I CAN'T AFFORD THE SHOTS	3.3%
I HAVE TRANSPORTATION PROBLEMS	1.9%
I DON'T KNOW WHERE TO GET THE SHOTS	0.7%
IT TAKES TOO LONG BEFORE I CAN GET SOMEONE TO ADMINISTER THE VACCINE	0.3%
ANOTHER REASON	67.7%

The research team assigned three analysts to independently review both the pre-defined and "another reason" responses to this survey question. Each analyst assigned each response to one of six categories of rationale for immunization hesitancy. The categories and their assignment characteristics were:

- **Safety:** Respondents expressed concern that vaccine would cause harm, either physical or emotional, to children. Concepts included concern about child pain/discomfort, child risk for disease/disability development, and perceived links to autism. Key words included "risk", "danger", "side-effects", "disease", "autism", and "safety".

- **Necessity:** Respondents indicated that vaccination is not important or needed for young children to become healthy adolescents/adults. Concepts included a preference for children to develop immunity naturally (by contracting illness) and a perceived lack of risk to children from disease exposure. Key words included "necessary", "essential", "need", "required", "recommended", "illness", and "immune".

- **Principle:** Respondents indicated that they are against giving vaccinations to children for personal, moral, or religious reasons. Concepts included a perceived unnaturalness to immunization, vaccination as an act of violation, or distrust of those responsible for vaccination. Key words included "choice", "personal", "agree/disagree", "believe", "feel", and "trust".

- **Access:** Respondents indicated that they cannot get vaccinations for their children. The only concept identified was the inability to get shots. Key words were "access" and "supply".

- **Urgency:** Respondents indicated that they do not believe children require vaccinations at their current age or within an immediate time frame. Concepts included children being too young for vaccination shots, or vaccination schedules being inappropriate for children's needs. Key words included "time", "early", "next", "later", "closer", "age", and "delay".

- **Effectiveness:** Respondents expressed skepticism or doubt regarding vaccines' ability to prevent/reduce severity of communicable disease. The only concept identified was the lack of data or information that convinced respondents of vaccines' effectiveness. Key words included "proof", "data", "information", "guarantee", "benefits", and "effectiveness".

TABLE 3. PERCENTAGE OF NOTALL GROUP RESPONDENTS WHO SELECTED EACH PRE-DEFINED REASON FOR NOT TAKING SOME OR ALL OF THEIR CHILDREN FOR SHOTS BY RATIONALE CATEGORY

CATEGORY	PERCENTAGE
SAFETY	67%
NECESSITY	21%
PRINCIPLE	10%
ACCESS	7%
URGENCY	6%
EFFECTIVENESS	2%
N/A	1%

Cohen's kappa coefficient was applied to evaluate inter-rater agreement among the three analysts. Any disagreement among the results was arbitrated to determine final categories for the responses. Because the most frequently-cited pre-defined survey response—"The number of shots given at one time bothers me"—could be attributed to several rationale categories, it was determined that further data collection and clarification was required to fully understand this concern (see "Maine Parent Intercept Interviews", below). The remaining responses were coded as shown in Table 3.

Of the six categories, **safety** and **necessity** were most frequently cited as rationales among respondents in the NotAll group. Safety concerns identified in survey responses focused on the potential side effects of vaccination (i.e., "I'm afraid my children will become autistic" and "I think preschool shots for children can cause illness instead of preventing it"). Necessity concerns identified in survey responses focused on the lack of need for immunization to keep children healthy (i.e., "I think preschool shots for children are unnecessary").

For many respondents, the issues of safety and necessity were intertwined, as the belief that certain shots were unnecessary for their children—especially at very young ages—reflected respondents' concerns that the potential benefits of immunization were outweighed by the perceived risks of health complications posed by vaccines.

MAINE POPULATION ANALYSIS AND TARGET AUDIENCE IDENTIFICATION

State-level immunization promotion experiences suggest that Maine parents are not a homogenous group. Families with different socioeconomic conditions and at different life stages represent distinct "target audiences" for immunization education and outreach. To understand these different audiences, the research team for this project conducted a population analysis of parents with young children in Maine.

Population Analysis Methodology

The population analysis methodology employs two evidence-based disciplines—neighborhood segmentation and decision mapping—to organize individuals and families into behavior-based groups that are predictable, consistent, and relevant to how they tend to participate in government-sponsored programs and services. For each target group, demographic and psychosocial profiles were generated that identify barriers and motivators for individuals to participate in a specific behavior, program, or service. These profiles also identify effective communication methods and tools that engage, motivate, and support targeted individuals and families throughout the lifecycle of their participation in the program. The neighborhood segmentation aspect of the population analysis is based on the work of work of Michael J. Weiss,[5] and guided by Nielsen Claritas' neighborhood segmentation program PRIZM NE™. The decision mapping process aspect of the population analysis is based on the evidence-based behavior models of several respected researchers.[6]

To identify the population cohort that would constitute the target audience(s) for immunization promotion and education, the research team used the population analysis methodology to filter Maine communities at the United States Census Block Group level, focusing on those communities with families that include children younger than age six. Then, the research team organized households from these communities into behavior-based groups, identifying each Block Group in Maine by the dominant target audience living there (dominance was determined by identifying target audiences that represented at least 25% of the total population in a block group, with no other single target audience representing more than 10% of the total population).

Based on the number of target audiences identified as dominant at the block group level, as well as the total Maine population that each block group represented, the research team identified both primary target audiences (Town Choice, Rural Legacy, and Town Legacy) for immunization outreach and education, as well as specialty target audiences (Second City Transitional and Rural Choice) that were based in a few concentrated areas around the state.

Target Audience Definition

Using the population analysis methodology described above, the research team identified five distinct groups of Maine parents with children younger than age six. Appendix A provides a detailed target audience profile for each of these groups; highlights are described in Table 4 (primary target audiences) and Table 5 (specialty target audiences) below.

TABLE 4. DEMOGRAPHIC CHARACTERISTICS OF PRIMARY TARGET AUDIENCES

TOWN CHOICE	RURAL LEGACY	TOWN LEGACY
AGE 25–44	AGE 25–44	YOUNGER THAN AGE 35
COLLEGE GRADUATES	HIGH SCHOOL GRADUATES	HIGH SCHOOL GRADUATES
UPPER-MIDDLE INCOME	LOWER-MIDDLE INCOME	LOW INCOME
SMALLER FAMILY SIZE	SEVERAL CHILDREN IN THE HOUSEHOLD	LARGER FAMILY SIZE
CONCENTRATED ALONG THE COAST	FOUND THROUGHOUT THE STATE AWAY FROM THE COAST	FOUND IN PARTS OF WESTERN MAINE AND AROOSTOOK AND WASHINGTON COUNTIES

TABLE 5. DEMOGRAPHIC CHARACTERISTICS OF SPECIALTY TARGET AUDIENCES

SECOND CITY TRANSITIONAL	RURAL CHOICE
YOUNGER THAN AGE 35	AGE 25–44
SOME COLLEGE EDUCATION	SOME COLLEGE EDUCATION
LOW INCOME	UPPER-MIDDLE INCOME
SINGLES, COUPLES, AND SMALLER FAMILIES	SEVERAL CHILDREN IN THE HOUSEHOLD
FOUND PRIMARILY IN CUMBERLAND COUNTY	FOUND IN YORK AND ANDROSCOGGIN COUNTIES

Demographic information from the 2008 Maine Early Childhood Immunization Survey Report suggests that the NotAll group conforms most closely to the Town Choice target audience. The NotAll group showed to be, on average, slightly older than those respondents who indicated that their children had received all of their vaccinations, with higher levels of education and more preschool children living in the household. However, subsequent data collection (see "Maine Parent Intercept Interviews", below) finds families who delay or skip immunizations for their children present in all five of the target audiences described above.

MAINE PARENT INTERCEPT INTERVIEWS

The field research conducted for this project consisted of a geographically-dispersed series of intercept interviews with Maine parents of children younger than age five, using a structured survey instrument (Appendix B). The instrument and intercept interview results are described below.

Message Development

Using the analysis of parents' hesitancy rationales (see "Qualitative Analysis of Maine Early Childhood Immunization Survey Report (2008)", above) and target audience characteristics (see "Maine Population Analysis and Target Audience Identification", above), the research team for this project created pro-immunization messages designed to address parents' safety and necessity concerns. Six separate messages (Appendix C) were developed for testing with the target audience populations; descriptions of these messages are provided below.

- **Message A** addressed the necessity of childhood immunization by underscoring the importance of vaccinating "on time, every time" and "counting on" the parent. This message aimed to engage parents around the concept of parental duty to ensure the health and safety of their children.

- **Message B** addressed both safety and necessity concerns by reminding parents of the diseases against which they must immunize their children. Also, this message indirectly addressed autism, one of the top safety concerns—which is too complex and controversial an issue to message directly—by focusing on the necessity of protecting against measles through the MMR shot, the vaccine most typically associated with this concern.

- **Message C** addressed safety concerns about the number of shots given to children at one time specifically. As the rationale behind this barrier could not be defined at the time of message development—the research team planned additional data gathering during the field research—this message was kept somewhat generic.

- **Message D** addressed both safety and necessity concerns. Similar to Message B, this message reminded parents of the diseases from which they must protect their children, but used a historical perspective to test parents' perceptions of the authority of an "older" voice compared to that of a "contemporary" voice.

- **Message E** addressed the necessity of immunization by underscoring the importance of vaccinating children "on time, every time". This message was similar to Message A, but used a call to action for parents to protect their children, rather than Message A's appeal to parental duty.

- **Message F** was derived from a recently launched immunization campaign in Colorado. As a best practice, the research team supports evaluating the potential efficacy of existing outreach campaigns to maximize knowledge and resources.

In addition to the messages, the research team wanted to test how different target audiences responded to images that potentially could be used in a childhood immunization campaign. Five images of family, physicians, parents, grandparents, and children were chosen for testing (Appendix D), each representing a potential source of information when considering immunization of children. The goal was to determine, through the intercept interview process, which images elicited statements of trust and confidence from parents when paired with pro-immunization information.

Intercept Interview Survey Instrument

A survey was administered through intercept interviews to test its pro-immunization messages/images and to clarify parents' concern over the number of shots given to a child at one time through the same instrument.

To uncover parents' rationale behind concerns about the number of shots given to children at one time, survey questions that associated this issue with each of the six different rationale categories (safety, necessity, principle, access, urgency, and effectiveness) were asked.

To test message effectiveness, survey questions were designed to evaluate the clarity, emotional impact, and inspiration to action provided by each message. Effective messages require a balance of emotion and action. A strong emotional response is ineffective without inspiring people to move towards behavior change, and a desire for action is less effective if people do not feel good about it.

To test images, survey questions were designed to evaluate the emotional impact and level of trust each image evoked. Appropriate images can support effective messages by building positive emotional response and increased levels of trust.

Data collection sites were chosen strategically to achieve samples of each of the five target audiences in Maine. Intercept interviews occurred at ten different locations in York, Androscoggin, Hancock, and Penobscot counties.

Intercept Interview Survey Participation

The intercept interview survey process collected 91 responses. All survey respondents were parents of children younger than age five, and were economically and geographically diverse. More than one-third of respondents (38.5%) indicated that they had skipped or delayed their child's vaccination at some point in time.

ZIP codes were collected from each survey respondent, which were used to geo-code the respondents as part of survey response analysis. A geo-code is a numeric indicator that associates a household with a set of projected characteristics for the average household in its neighborhood. Results of geo-coding process indicated that each of the five target audiences (see "Maine Population Analysis and Target Audience Identification", above) were included among the survey respondents.

Message Testing Results

A coded response system was used to evaluate each pro-immunization message for clarity, emotion, and action. To evaluate emotion, participants' reaction to each message was coded as positive (i.e., This made me feel good), neutral (i.e., Nothing, really), or negative (i.e., This is too pushy). To evaluate action, participants' motivation to act on each message was coded as proactive (i.e., Check that my baby is up to date), neutral (i.e., I don't want to do anything), or counteractive (i.e., Rip it off the wall).

Messages that inspired positive emotions and proactive action were considered the most effective. Based on overall clarity, positive emotional impact, and proactive motivation, the most effective messages were:

- **Message A and Message E** inspired statements of motivation to act from survey participants, such as:
    - "Contact my doctor to make sure nothing is missing"
    - "Double check my children are up to date"
    - "Call the doctor; make sure to schedule my next appointment when there"

- **Message B** was considered effective, inspiring statements of motivation to act such as:
    - "Take another look, make sure my measles information is up to date"
    - "Express to families about MMR and the importance of measles"
    - "Keep them vaccinated, always"

- **Message C** was considered fairly effective, but had clarity issues related to the question-and-answer format of the message.

Messages that evoked negative emotions and counteractive action responses were considered the least effective. By these criteria, the least effective messages were:

- **Message F** elicited both negative emotional response and lack of desire to act.

- **Message D** evoked extensive negative emotion, which outweighed a moderate level of proactive action response.

In addition to analyzing the overall effectiveness of each message, the effectiveness of each message by target audience group was analyzed. Overall, messages considered to be the most effective by the entire survey respondent group were also considered effective by each target audience. Variation in message reaction among the target audiences is described below.

- **Message A:** Most Rural Choice, Second City Transitional, and Rural Legacy respondents reacted positively to this message and also reported being inspired to take positive action. Town Choice and Town Legacy respondents were split between positive and negative emotional reactions and were generally neutral on taking action.

- **Message B:** Most target audiences were split between positive and negative reactions to this message, with the majority of the negative emotional reactions expressed by the Rural Choice and Town Legacy respondents. Despite the negative emotional reactions, however, this message recorded the highest number of proactive responses of any of the messages tested. This held true for all target audiences but Town Legacy, whose responses were counteractive.

- **Message C:** Most target audiences were split between positive and negative emotional reactions to this message. Only the Rural Legacy and Town Legacy respondents had more proactive responses to the message than counteractive.

- **Message D:** This message received the most negative emotional reactions of all messages tested; only the Rural Legacy respondents registered more positive reactions than negative. Most Town Choice and Second City Transitional respondents were neutral in their motivation to act on the message, while most Rural Choice, Rural Legacy, and Town Legacy respondents had proactive responses.

- **Message E:** Town Choice and Rural Choice respondents were split between positive and negative emotional reactions to this message, while most of the Second City Transitional, Rural Legacy, and Town Legacy respondents had positive reactions. Only Rural Choice and Town Legacy respondents reported more proactive motivations to act on the message than counteractive.

- **Message F:** Rural Choice and Town Legacy respondents had more positive emotional reactions to this message than negative, while all other target audiences registered more neutral/negative responses than positive. The same holds true for reported proactive/reactive motivations to act on the message.

Image Testing Results

A coded response system was also used to evaluate each image for emotional response and level of trust inspired in survey respondents by each image shown to them. To evaluate both emotion and trust, participants' reaction to each image was coded as positive, neutral, or negative.

Images that inspired both positive emotion and trust were considered the most effective. Based on these criteria, the most effective images were those that focused on a baby with his or her parent(s). Survey participants responded less positively to images that focused on parents only, physicians, or grandparents.

- **Baby and parent(s) images (Art Concepts A and D):** Most respondents responded extremely positively to the "cute" aspect of the child, rather than the parents in the background (i.e., "I love that baby, and I would want to keep her safe"). While many participants identified positive levels of trust (i.e. "I always trust families"), some participants were wary of who the parents were (i.e., "I'm not sure if I would trust this because I don't know what their views are").

- **Physician image (Art Concept B):** Many participants identified positive levels of emotion and trust, yet many were turned off by disconnect between the image of "fake" doctors and their ability to offer advice (i.e., "I would trust this more from my own doctor" or "No, because they are actors not real doctors").

- **Grandparent image (Art Concept C):** Most participants identified negative emotional response and low levels of trust. Many found the image sad and did not trust the image as it represented dated information (i.e., "I wouldn't trust her information, but the experience would be interesting to hear").

- **Older children image (Art Concept E):** Most participants responded positively to the image (i.e., "They make me think a child is happy and safe"). Some participants felt the image was directed at children (i.e., "I think this one is for the children, not the parents"). While the image was positively received, it did not evoke high levels of trust for delivering vaccination information (i.e., "No, but it's nice" or "It doesn't effect my decision").

"Number of Shots at One Time" Rationale Clarification

Intercept interview survey respondents were split on the issue of the number of shots given at one time bothering them, with similar numbers of respondents agreeing and disagreeing that the number of shots given to a child at one time concerned them. Target audiences with the greatest degree of concern—as a percentage of all respondents from that target audience—were Second City Transitional and Town Choice.

TABLE 6. PERCENTAGE OF NOT UP-TO-DATE RESPONDENTS WHO AGREED WITH EACH PRE-DEFINED CONCERN ABOUT MULTIPLE SHOTS BY WHETHER OVERALL CONCERN ABOUT MULTIPLE SHOTS CAUSED THEM TO EITHER DELAY OR SKIP VACCINATIONS

CONCERN	PERCENTAGE WHOSE OVERALL CONCERN **CAUSED THEM** TO DELAY OR SKIP (N=15)	PERCENTAGE WHOSE OVERALL CONCERN **DID NOT CAUSE THEM** TO DELAY OR SKIP (N=20)
WRONG AMOUNT OR TYPE (SAFETY)	53%	10%
TOO MUCH PAIN (SAFETY)	66%	15%
TEMPORARY BAD REACTION (SAFETY)	86%	50%
PERMANENT BAD REACTION (SAFETY)	40%	20%
TOO MANY THINGS (SAFETY)	67%	30%
NOT NECESSARY, SPREAD OUT (NECESSITY)	74%	15%
CONVENIENCE OF DOCTORS (NECESSITY)	47%	5%

Because of the small sample size of parents who were bothered by the number of shots (N=35), analysis of the rationale behind their concern is limited. However, preliminary trends in the data can point to areas for potential future study. For example, for those respondents whose concern about the number of shots potentially caused them to delay or skip vaccinating their children (Table 6), survey results showed temporary bad reactions to be the top concern. However, when comparing respondents whose concern about the number of shots caused them to delay or skip vaccinating their children to respondents whose concern did not cause them to delay or skip, necessity of multiple shots emerges as the top concern, as this concern has the highest difference between the two groups. As most parents in this group earlier agreed that immunizations as a whole are safe and necessary, this interplay of necessity and safety concerns may point to the rationale behind choosing an alternative schedule. If resources become available, this issue would warrant further exploration.

RECOMMENDATIONS

The research described in this report suggests positive campaign messages addressing concerns of the different types of parents in Maine would support parents' decision to fully vaccinate their children according to the recommended immunization schedule. That said, the battle to win over immunization-hesitant parents will remain a long one, and require continuous effort and innovation. To establish an environment of innovation and responsiveness to the local concerns of parents, the research team for this project provides the following messaging and outreach recommendations.

Campaign Materials

Campaign materials need to address barriers and motivate through parental responsibility. Messages need to convince parents that getting vaccines is safer than getting diseases, and that alternative vaccination schedules expose children to unnecessary risks. Messages should avoid "scare tactics" and overly directive approaches, emphasizing instead the critical role of parents in ensuring the health and safety of their children. Messages should be paired with image(s) of babies and young children to make the messages appealing to parents.

Two series of sample messages and images for the proposed pro-immunization campaign can be found in Appendix E. Based on the data analysis described in this report, the research team selected test messages A and B and adapted them for use in this campaign (Samples 1 and 2). In addition, data clarification around the multiple shots issue revealed that a combination of safety and neccesity issues may be driving a parent's choice of an "alternative" vaccination schedule. In response, the research team developed a new message (Sample 3) focused on those parents who may be considering delaying or skipping vaccination. Series 1 pairs these three messages with a healthy infant picture, while Series 2 incorporates an image of an entire family. Additional information about the selected messages is below.

Sample 1 (Message A): This message focuses on the necessity of vaccines, and strongly plays to parental responsibility to stay on schedule. This message will resonate well with parents who have a combination of safety and necessity concerns. This message is also likely to elicit proactive responses from three of the five target audiences (Rural Choice, Second City Transitional, and Rural Legacy).

Sample 2 (Message B): This message indirectly addresses safety concerns about the fear of vaccines causing autism by focusing on necessity of the vaccine for preventing measles (the MMR vaccine has been the focus of the autism scare over the past ten years). This message will resonate with parents whose fear of autism challenges the necessity to vaccinate. This message will elicit proactive responses from all five target audiences.

Sample 3 (New message based on data analysis): This message addresses the intertwined issues of safety and necessity, based on data clarification around the number of shots given at one time. This message will resonate with those parents who choose an "alternative" vaccination schedule based on their lack of urgency to get necessary vaccines for their children.

Target Audience Communication Channels

The Maine Early Childhood Immunization Survey Report found that, while both the fully immunized and NotAll groups used a variety of information sources to help them make their vaccination decisions, overwhelmingly the most helpful source cited by the respondents was a pediatrician or family physician. The NotAll group reported using more healthcare information sources in total than the fully immunized group and had a higher reliance on Internet sources and friends.

Given the range of different family types in Maine, effective messaging would require use of multiple communication channels, each targeted to different audiences. In response, information on the most effective communication channels for each of the five campaign target audiences is detailed in Appendix A; highlights are described in Table 7 (primary target audiences) and Table 8 (specialty target audiences) below.

TABLE 7. COMMUNICATION CHANNELS FOR PRIMARY TARGET AUDIENCES

TOWN CHOICE	RURAL LEGACY	TOWN LEGACY
RADIO	RADIO	RADIO
PRINT (MAILERS, NEWSPAPERS, MAGAZINES, BANNERS, POSTERS, BROCHURES, ETC.)	PRINT (MAILERS, NEWSPAPERS, BROCHURES, POSTERS, YARD SIGNS, ETC.)	PRINT (MAILERS, NEWSPAPERS, POINT OF PURCHASE DISPLAYS, BROCHURES, ETC.)
ELECTRONIC (LISTSERVS, EMAILS, WEBSITES, WEB BANNERS, PHONE CALLS)	ELECTRONIC (EMAILS, WEBSITES, WEB BANNERS, LISTSERVS, PHONE CALLS)	ELECTRONIC (EMAILS, PHONE CALLS/MESSAGES)
TELEVISION	TELEVISION	TELEVISION
EVENT (DISCUSSIONS, SPORTING EVENTS, MOVIE PREVIEWS, CELEBRITY APPEARANCES, ETC.)	EVENT (CELEBRITY APPEARANCES, POLITICAL EVENTS, ART/CULTURAL EVENTS, ETC.)	EVENT (DISCUSSIONS, AWARD CEREMONIES, ART/CULTURAL EVENTS, ETC.)

TABLE 8. COMMUNICATION CHANNELS FOR SPECIALTY TARGET AUDIENCES

SECOND CITY TRANSITIONAL	RURAL CHOICE
RADIO	RADIO
PRINT (NEWSPAPERS, MAILERS, YARD SIGNS, BANNERS, POSTERS, POINT OF PURCHASE DISPLAYS, ETC.)	PRINT (MAILERS, BROCHURES, POINT OF PURCHASE DISPLAYS, MAGAZINES, ETC.)
ELECTRONIC (PHONE CALLS, EMAILS, WEBSITES, WEB BANNERS, LISTSERVS, TEXT MESSAGES)	ELECTRONIC (WEBSITES, WEB BANNERS, LISTSERVS, PHONE CALLS)
TELEVISION	TELEVISION
EVENT (DISCUSSIONS, CIVIC EVENTS, EDUCATIONAL EVENTS, ETC.)	EVENT (ART/CULTURAL EVENTS, AWARDS CEREMONIES, CELEBRITY APPEARANCES, ETC.)

Targeted Outreach

Targeted outreach increases the success of awareness and education campaigns by tailoring the campaign's messages and strategies for different audiences. By understanding each target audience's unique needs for accessing and processing information to make decisions, outreach efforts can be targeted to meet specific audiences' different informational and motivational needs regarding vaccination.

In addition to providing detailed behavioral profiles for each of the five audiences identified for the immunization outreach effort, this report provides detailed county-level maps (Appendix F) showcasing where these audiences live throughout the state of Maine. These maps can help focus outreach efforts by identifying the most prevalent target audiences in a geographic area.

A targeted outreach toolkit (Appendix G) has been developed to help organizations conduct immunization education and outreach. This toolkit provides step-by-step guidance for organizations, including suggested campaign materials and target outreach strategies.

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5 Weiss, MJ. The Clustering of America. 1st edition. Harper & Row: 1988; Weiss, MJ. Latitudes & Attitudes: An Atlas of American Tastes, Trends, Politics, and Passions: From Abilene, Texas to Zanesville, Ohio. 1st edition. Little Brown and Company: 1994; Weiss, MJ. The Clustered World: How We Live, What We Buy, and What It All Means About Who We Are. 1st edition. Little Brown and Company: 2000.

6 Ruby K. Payne, Ph.D., professional educator in the Michigan school system, author of "A Framework for Understanding Poverty", and developer of the mindset maps that describe behavioral motivators of people from different socioeconomic classes; Alan Page Fiske, Ph.D., Professor of Anthropology at University of California, Los Angeles who specializes in the social relationships among humans and described the four relational models that describe daily interpersonal interaction; and Roy F. Baumeister, Ph.D., social psychologist at Florida State University who specializes in issues of self-control, self-esteem, and motivation.

APPENDIX A. DETAILED TARGET AUDIENCE PROFILES

MAINE TARGET AUDIENCE

TOWN LEGACY

These economically-challenged, high-school-educated, younger families are found in parts of Western Maine and Aroostook and Washington Counties.

Town Legacies trust the advice of leaders in their family or community with similar life experiences to their own and will use that advice to guide their decisions. If the immunization experience of these leaders is negative, Town Legacy families may hesitate to vaccinate their children. However, if the immunization experience of these leaders is positive or neutral, Town Legacies will typically honor the instructions of their doctors on how to proceed with the vaccination schedule.

Field research conducted for this analysis shows that low-income groups such as Town Legacy have only limited concerns about vaccination, including the number of shots given to a child in a single immunization visit. The issue of number of shots had been established previously—in the 2008 Maine Early Childhood Immunization Survey Report—as a significant barrier to on-time immunization among many Maine parents.

DEMOGRAPHICS

VITAL STATISTICS

Younger than age 35

High school graduates

Low income

HOUSEHOLD MAKEUP

Larger family size

RECEPTIVITY FACTORS	COMMUNICATION CHANNELS	
WHERE DO THEY GET INFORMATION? Town Legacy look to individuals with responsibility for the good of their family, often matriarch or patriarch figures **WHOM DO THEY TRUST?** Town Legacy trust those who have had similar or shared experiences with them **HOW DO THEY SEE THEMSELVES?** Town Legacy see themselves as achievers, working hard to make things better for their family **HOW DO THEY PARTICIPATE IN THEIR COMMUNITY?** Town Legacy share resources with those in need in the community **HOW DO THEY MAKE DECISIONS?** Town Legacy make decisions which protect themselves and their immediate family	**RADIO** Classic rock Rock Country Sports Gospel Adult contemporary Urban contemporary **PRINT** Mailers, particularly those with incentives or which focus on emotional appeal Newspapers, particularly free weeklies, but also local and major dailies Point of Purchase displays Brochures Banners Posters Flyers Magazines, including news and special topics Professional journals Yard signs **ELECTRONIC** Emails Phone calls/messages	**TELEVISION** Comedy Sitcom Sports Daytime Primetime Talk show Reality Drama Cartoon Educational Children **EVENT** Discussions with social leaders, peer groups, coworkers, bosses, mentors, and family members Award ceremonies Art/cultural Faith based Civic Philanthropic Educational Political Sporting (participant) Social

MAINE TARGET AUDIENCE
TOWN CHOICE

These middle- to upper-middle income, college-educated, blue- and white-collar households have fashioned comfortable, child-centered lifestyles in towns concentrated along the coast.

Town Choice enjoy interacting with others in their community, but make decisions based on their own analysis and interpretation of the evidence. This group is likely to conduct online searches for information on the effects of childhood immunization, making them the most exposed to online anti-vaccination literature of all the Maine target audiences.

Town Choice look for "expert" advice in both print and electronic media sources to inform their decisions. Thus, one would predict this audience to follow the expert advice of physicians—yet Town Choice are more likely than most other groups to skip or delay. The disconnect between their information-seeking habits and actual behaviors points to their aversion of any amount of risk for their children. So while Town Choice parents may understand a physician recommendation about vaccinations, they may still be heavily influenced to delay or skip based on first-person stories from parents who associate a childhood injury or illness with vaccination. When working with Town Choice on making immunization decisions for their children, re-direct their risk aversion by providing real-world evidence of how skipping or delaying vaccinations can negatively affect child health, and be ready to answer detailed questions about the body's immune response system and the ingredients of vaccines.

Field research conducted for this analysis shows that Town Choice are slightly more concerned with safety and necessity issues relating to vaccination than the other groups surveyed. These results are consistent with concerns reported by similar families (higher educated with multiple young children) participating in the 2008 Maine Early Childhood Immunization Survey, who demonstrated a greater likelihood of skipping or delaying childhood immunizations.

DEMOGRAPHICS

VITAL STATISTICS

Age 25–44

College graduates

Upper-middle income

HOUSEHOLD MAKEUP

Smaller family size

RECEPTIVITY FACTORS	COMMUNICATION CHANNELS	
WHERE DO THEY GET INFORMATION? Town Choice use traditional broadcast, cable, print, and Internet information sources **WHOM DO THEY TRUST?** Town Choice value the opinions of experts with demonstrated experience and knowledge **HOW DO THEY SEE THEMSELVES?** Town Choice see themselves as individuals who get along well with others in their community **HOW DO THEY PARTICIPATE IN THEIR COMMUNITY?** Town Choice participate in their community largely for economic reasons, whether working at a job or going shopping **HOW DO THEY MAKE DECISIONS?** Town Choice make decisions that will contribute to growth and improvement for their family	**RADIO** Top 40 Adult contemporary Classic rock Rock Country News Sports Religious Public **PRINT** Mailers Newspapers, including local, free weeklies and major dailies Magazines, particularly news, special topic, and pop culture Banners Posters Brochures Professional journals Point of Purchase displays **ELECTRONIC** Listservs Emails Websites Web banners Phone calls	**TELEVISION** News Sports Primetime Talk show Documentary Comedy Sitcom Movie Cartoon Educational Children **EVENT** Discussions with coworkers, bosses, physicians, mentors, family members, and civic/social leaders Sporting (participant or fan) Movie previews Celebrity appearances Educational Social Civic Faith based Political Philanthropic Award ceremonies

MAINE TARGET AUDIENCE
RURAL LEGACY

Rural Legacy are high-school-educated, working-class couples with large families found throughout the state away from the coast.

Rural Legacy make decisions using the "rules" they've learned from their life experiences to understand and organize the world around them. These rules tend to derive from established traditions—religion, local economy, inter-family dynamics—and are designed to provide consistency to individual and group behavior. Trusted sources of information tend to remain stable over time and therefore make the best messengers for new information to Rural Legacy communities.

Field research conducted for this analysis shows that low-income groups such as Rural Legacy have only limited concerns about vaccination, including the number of shots given to a child in a single immunization visit. The issue of number of shots had been established previously—in the 2008 Maine Early Childhood Immunization Survey Report—as a significant barrier to on-time immunization among many Maine parents.

DEMOGRAPHICS

VITAL STATISTICS

Age 25–44

High school graduates

Lower-middle income

HOUSEHOLD MAKEUP

Several children in the household

RECEPTIVITY FACTORS	COMMUNICATION CHANNELS	
WHERE DO THEY GET INFORMATION? Rural Legacy process information about their world filtered through their own belief system, rather than mass media sources. **WHOM DO THEY TRUST?** Rural Legacy trust the teachings of influential figures. Whether religious, political, or social, they are figures the Rural Legacy do not know personally **HOW DO THEY SEE THEMSELVES?** Rural Legacy see themselves as leading good lives that others can follow or emulate **HOW DO THEY PARTICIPATE IN THEIR COMMUNITY?** Rural Legacy are supportive of the needs of their immediate friends and neighbors **HOW DO THEY MAKE DECISIONS?** Rural Legacy make decisions which defend themselves and their immediate family	**RADIO** Classic rock Rock Country Sports Gossip Religious **PRINT** Mailers, especially those with logical or emotional appeal and incentives Newspapers, particularly local and major market newspapers Brochures Posters Yard signs Magazines, including news, pop culture, and special topic Point of Purchase displays **ELECTRONIC** Emails Websites Web banners Listservs Phone calls	**TELEVISION** Sports Daytime Reality Sitcom Cartoon Educational Children **EVENT** Celebrity appearances Political Art/cultural Movie previews Discussions with civic/social leaders Faith based Civic Educational Sporting (fan)

MAINE TARGET AUDIENCE
SECOND CITY TRANSITIONAL

Second City Transitionals are young adults with lives in flux. Low-income with some college education, these twenty-something singles and couples are just starting out on their career paths or starting over after changes to their life circumstances. This group is found primarily in Cumberland County.

Second City Transitional make decisions based on the promise of immediate benefit for themselves and their small families. This group may choose to delay certain vaccinations in the schedule to avoid the possibility of children's temporary bad reaction to shots (pain; discomfort) rather than considering the long term health consequences of an alternative immunization schedule.

Field research conducted for this analysis shows that Second City Transitional are slightly more concerned about vaccine safety and necessity than the average family surveyed, and that the number of shots given to a child at a single doctor visit is likely to influence their decision to delay or skip vaccines.

DEMOGRAPHICS

VITAL STATISTICS

Younger than age 35

Some college education

Low income

HOUSEHOLD MAKEUP

Singles, couples, and smaller families

RECEPTIVITY FACTORS	COMMUNICATION CHANNELS	
WHERE DO THEY GET INFORMATION? Second City Transitional get information from community-based press, radio, TV, and Internet **WHOM DO THEY TRUST?** Second City Transitional trust themselves first, applying reason and perspective from personal experience **HOW DO THEY SEE THEMSELVES?** Second City Transitional see themselves as trailblazers—out ahead of the rest of the community **HOW DO THEY PARTICIPATE IN THEIR COMMUNITY?** Second City Transitional see their community as a source of jobs and shopping only **HOW DO THEY MAKE DECISIONS?** Second City Transitional make decisions that give them immediate access to benefits	**RADIO** Top 40 Urban contemporary Alternative rock Rock **PRINT** Newspaper, local or free weeklies Mailers, particularly with logical appeal or incentives Yard signs Banners Posters Point of Purchase displays Magazines, including pop culture, news, and special topic Brochures **ELECTRONIC** Phone calls Emails Websites Web banners Listservs Text messages	**TELEVISION** Sports Reality Sitcom Movie Cartoon **EVENT** Discussions with civic/social leaders, bosses, or mentors Civic Educational Art/cultural Philanthropic Political Social Sporting (participant or fan)

MAINE TARGET AUDIENCE
RURAL CHOICE

The Rural Choice audience is mid-age parents who have turned high school and some college educations and blue-collar jobs into busy, middle- to upper-middle income lives. Found in York and Androscoggin counties, these large families tend to have active, outdoor-centric lifestyles.

Similar to the Rural Legacy target audience, Rural Choice use "rules"—derived from established traditions in religion, local economy, inter-family dynamics, etc.—to make decisions. However, Rural Choice tend to have greater socio-economic influence over their communities than do their Legacy neighbors, making them more likely to exert influence over social norms in the community. Trusted sources of information tend to remain stable over time, and those sources may include members of Rural Choice households.

Field research conducted for this analysis shows little bias, pro- or anti-, among Rural Choice for immunizing their children according to the recommended schedule.

DEMOGRAPHICS

VITAL STATISTICS

Age 25–44

Some college education

Upper-middle income

HOUSEHOLD MAKEUP

Several children in the household

RECEPTIVITY FACTORS	COMMUNICATION CHANNELS	
WHERE DO THEY GET INFORMATION? Rural Choice process information about their world filtered through their own belief system, rather than mass media sources **WHOM DO THEY TRUST?** Rural Choice trust the teachings of influential figures **HOW DO THEY SEE THEMSELVES?** Rural Choice see themselves as achievers, working hard to make things better for their family **HOW DO THEY PARTICIPATE IN THEIR COMMUNITY?** Rural Choice are supportive of the needs of their immediate friends and neighbors **HOW DO THEY MAKE DECISIONS?** Rural Choice make decisions that prioritize benefits for themselves and their family	**RADIO** Rock Country News Sports Religious Public **PRINT** Mailers, particularly informational, emotional, or with incentives Brochures Point of Purchase displays Magazines, including news, pop culture, or special topic Professional journals Newspapers, particularly major dailies and local or free weeklies Yard signs Posters Banners Yellow pages **ELECTRONIC** Websites Web banners Listservs Phone calls	**TELEVISION** Sports Primetime Talk show Documentary Comedy Drama Sitcom Cartoon Educational Children Movie **EVENT** Art/cultural Awards ceremonies Celebrity appearances Political Sporting (participant or fan) Social Educational Discussions with coworkers, mentors, or family members Movie previews

APPENDIX B.
INTERCEPT INTERVIEW SURVEY INSTRUMENT

1. **State:** ""Hello. I'm interested in learning more about childhood vaccination. I'm doing 10 minute survey, and if you'd like to participate I need to ask you one question to make sure you qualify."

2. **State:** "Are you the parent or caregiver of a child under the age of 5?"

   ☐ No ➡ ***State:*** *"Okay, today we're only collecting information from parents or caregivers of children under age 5. Thank you very much for your time."*

   ☐ Yes ➡ ***Proceed to Question 3***

3. **State:** "Today we are talking to parents about vaccination, and specifically about keeping your children's immunization schedule up-to-date. Up-to-date means getting all vaccinations recommended by the CDC at the time they recommend getting them **[Moderator: show vaccine schedule]**. There are many reasons that parents get behind on their child's immunization schedule (for example, missing appointments or choosing to skip or delay vaccinations). To the best of your knowledge, have your children ever delayed or missed any of their vaccinations at any time?"

   ☐ Yes ☐ No ☐ Don't Know

4. **State:** "We are working on an educational campaign about childhood vaccination. I'm going to ask you some basic questions about vaccination and then ask for your feedback on some messages. All responses are confidential, anonymous, and for research purposes only. At the end of the survey, I'll give you a $10 stipend for your time. Also, I want to let you know I am not a healthcare professional, so if you have any specific questions on vaccinations, I can't answer those. Do you have any questions? **[Moderator: wait for response and answer questions]**. Okay, let's get started."

5. **State:** We're going to ask you about reasons that may influence people's choice to vaccinate their children. Please tell me how much you agree or disagree with each statement."
   [Moderator show scale]

STATEMENT	STRONGLY DISAGREE	DISAGREE	NEITHER	AGREE	STRONGLY AGREE
Vaccines are safe for my child.	☐	☐	☐	☐	☐
Getting all of my child's vaccinations is necessary to keep him or her healthy.	☐	☐	☐	☐	☐
The number of shots given at one time at a doctor's visit concerns me.	☐	☐	☐	☐	☐

6. **State:** "Does the number of shots given at one time at a doctor's visit make you choose to get some vaccines, but delay getting other ones?"
   ➡ ***If yes, which and why***_____

7. **State:** "Does the number of shots given at one time at a doctor's visit make you choose to get some vaccines, but skip getting other ones all together?"
   ➡ ***If yes, which and why***_____

8. State: We are working on developing a campaign about childhood vaccination. I would like you tell me your thoughts on the following five messages and images.

9. **Message Concept A**
   a. Tell me in your own words what this message means.
   b. Was there anything confusing or unclear about this message?
   c. When you read this message, what does this make you feel and think about?
   d. What does this message make you want to do?

10. **Art Concept A**
   a. How do you feel about this person/these people?
   b. Would you trust a vaccination message, like the one we just reviewed, from this person?

11. **Message Concept B**
   a. Tell me in your own words what this message means.
   b. Was there anything confusing or unclear about this message?
   c. When you read this message, what does this make you feel and think about?
   d. What does this message make you want to do?

12. **Art Concept B**
    a. How do you feel about this person/these people?
    b. Would you trust a vaccination message, like the one we just reviewed, from this person?

13. **Message Concept C**
    a. Tell me in your own words what this message means.
    b. Was there anything confusing or unclear about this message?
    c. When you read this message, what does this make you feel and think about?
    d. What does this message make you want to do?

14. **Message Concept D**
    a. Tell me in your own words what this message means.
    b. Was there anything confusing or unclear about this message?
    c. When you read this message, what does this make you feel and think about?
    d. What does this message make you want to do?

15. **Art Concept D**
    a. How do you feel about this person/these people?
    b. Would you trust a vaccination message, like the one we just reviewed, from this person?

16. **Message Concept E**
    a. Tell me in your own words what this message means.
    b. Was there anything confusing or unclear about this message?
    c. When you read this message, what does this make you feel and think about?
    d. What does this message make you want to do?

17. **Art Concept E**
    a. How do you feel about this person/these people?
    b. Would you trust a vaccination message, like the one we just reviewed, from this person?

18. **State:** "Now we're going to ask questions specifically about the number of shots given at your child's doctor visits. Please tell me how much you agree or disagree with each statement."
    [Moderator show scale]

STATEMENT	STRONGLY DISAGREE	DISAGREE	NEITHER	AGREE	STRONGLY AGREE
Multiple shots makes it more likely my child will get the wrong amount or type of vaccine.	☐	☐	☐	☐	☐
Multiple shots cause my child too much pain, so I'd rather spread them out.	☐	☐	☐	☐	☐
Multiple shots at one time could cause my child a temporary bad reaction, such as getting sick or having trouble sleeping	☐	☐	☐	☐	☐
Multiple shots could cause my child to get a permanent disease or disorder.	☐	☐	☐	☐	☐
Multiple shots put too many things into my child's body at one time.	☐	☐	☐	☐	☐
Multiple shots are not necessary, I'd rather spread them out.	☐	☐	☐	☐	☐
Multiple shots at one time are only for the convenience of the doctor and not for real medical reasons.	☐	☐	☐	☐	☐

19. **State:** Are there other reasons the number of shots given at one time bothers you?

_____

Demographics

All responses are anonymous and for research purposes only.

1. ZIP code (please write) _____

2. Household income (please circle)

   $0–$14,999 $15,000–$24,999 $25,000–$49,999 $50,000–$74,999 $75,000+

3. Gender (please circle)

   Male Female

APPENDIX C. MESSAGES TESTED

Message A

Your baby is counting on you. Vaccinate on time, every time.

Every vaccine is needed to protect your baby from dangerous, or even deadly, diseases. Stay on the schedule recommended by your doctor.

Ask your doctor if your baby is up to date.

Message B

Think measles are a thing of the past? Think again.

Measles are still around, and still a threat to your baby's health. Protect your baby by getting all of her vaccinations.

Ask your doctor if your baby is up to date.

Message C

Worried about vaccinations? Having more than one shot is safe for babies.

Every vaccine is needed to protect your baby from dangerous, or even deadly, diseases. Stay on the schedule recommended by your doctor.

Ask your doctor if your baby is up to date.

Message D

50 years ago, I watched children die from measles. Today, you shouldn't have to.

Don't let history repeat itself. Protect your baby from dangerous, or even deadly, diseases by getting all of her vaccinations.

Ask your doctor if your baby is up to date.

Message E

Protect your baby when they need it most. Vaccinate on time, every time.

Every vaccine is needed to protect your baby from dangerous, or even deadly, diseases. Stay on the schedule recommended by your doctor.

Ask your doctor if your baby is up to date.

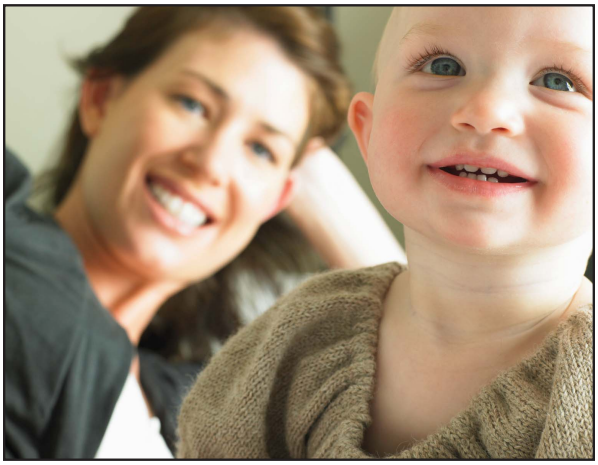
Message F

Immunization means protection. And when children are protected, they're good.

They're good to go out into the world and just be kids. Play with friends. Have adventures. Experience life the way only kids can.

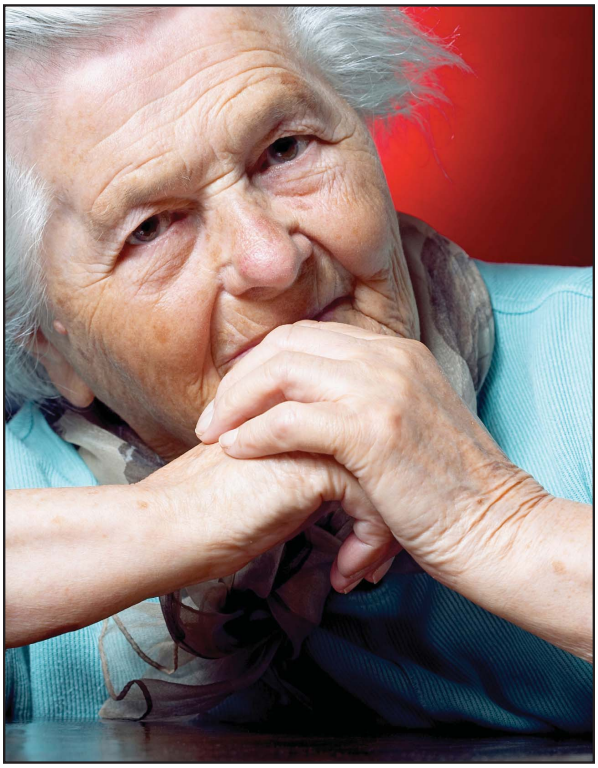
APPENDIX D. IMAGES TESTED

Art Concept A



Art Concept B

Art Concept C



Art Concept D

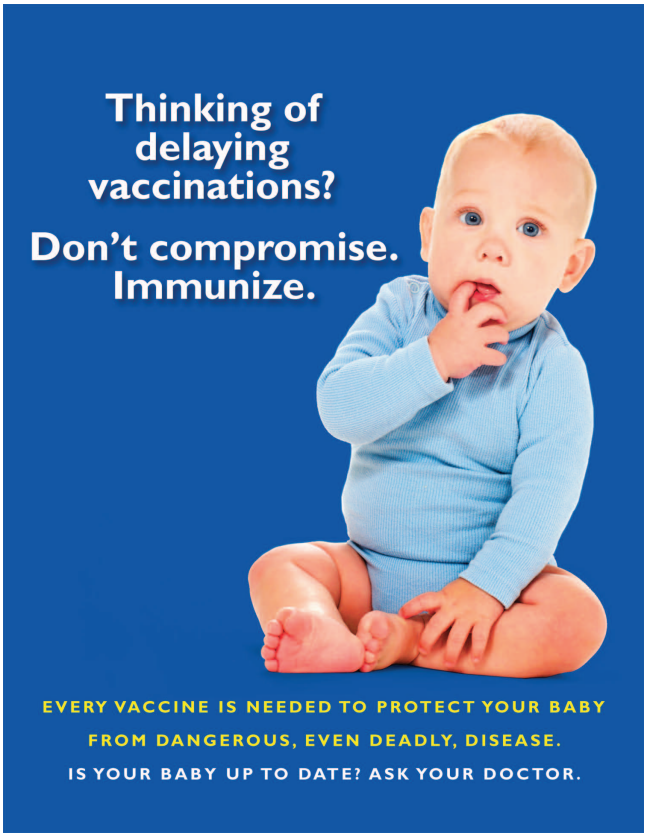
Art Concept E

APPENDIX E. SAMPLE CAMPAIGN MATERIALS

Series 1

SAMPLE 1

SAMPLE 2



SAMPLE 3

Series 2

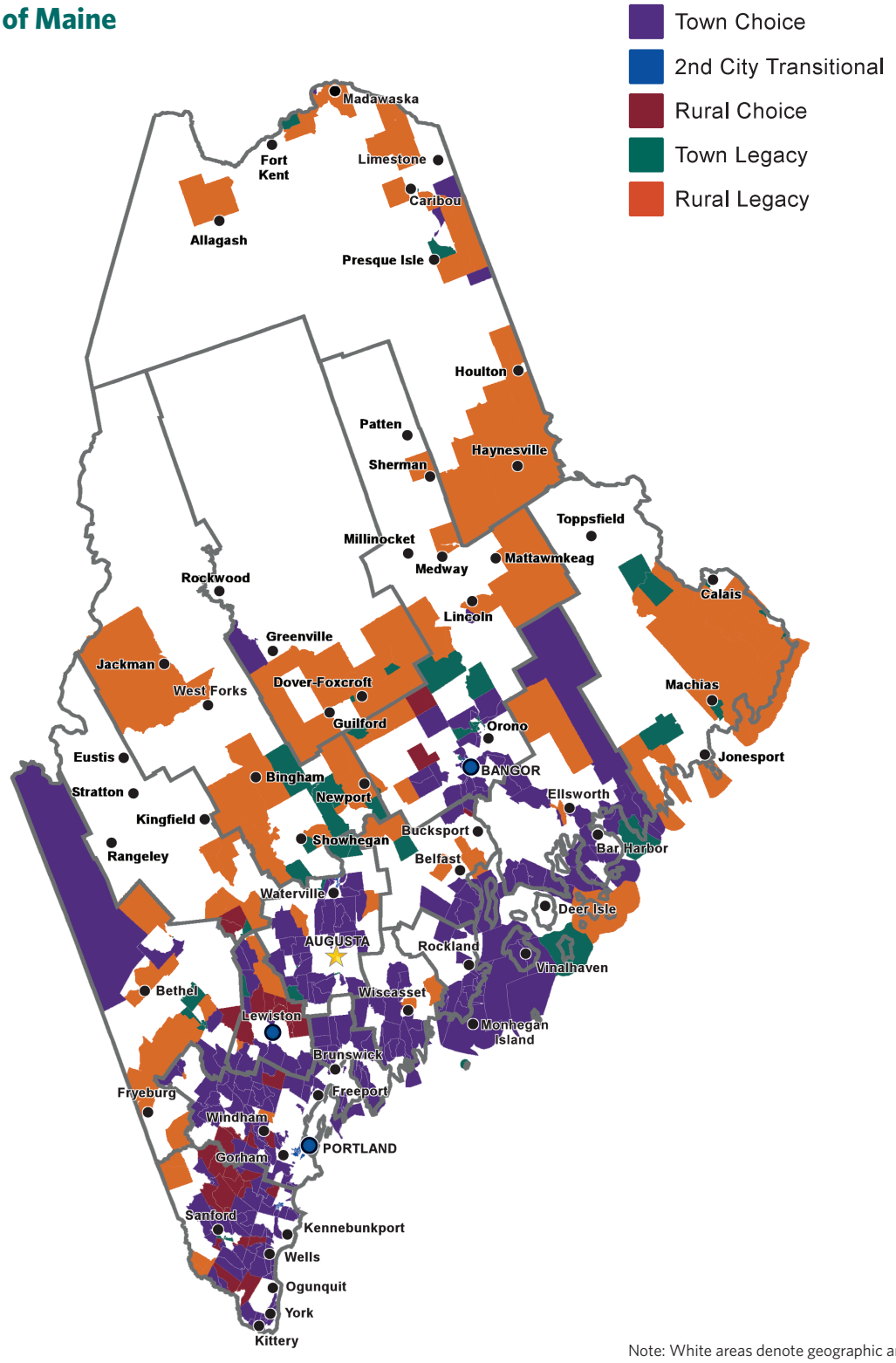
SAMPLE 1

SAMPLE 2

SAMPLE 3

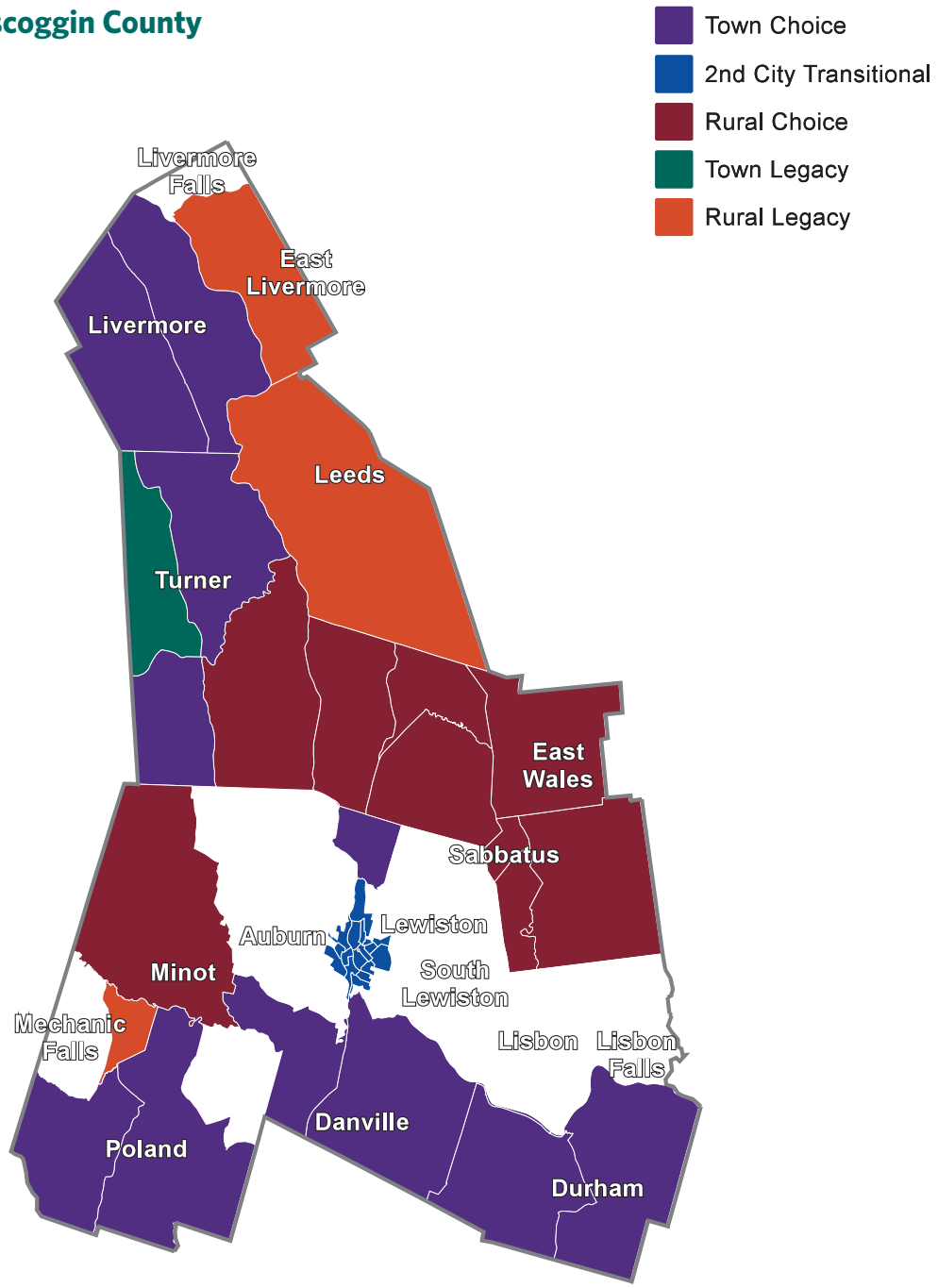
APPENDIX F. TARGET AUDIENCES BY COUNTY

State of Maine



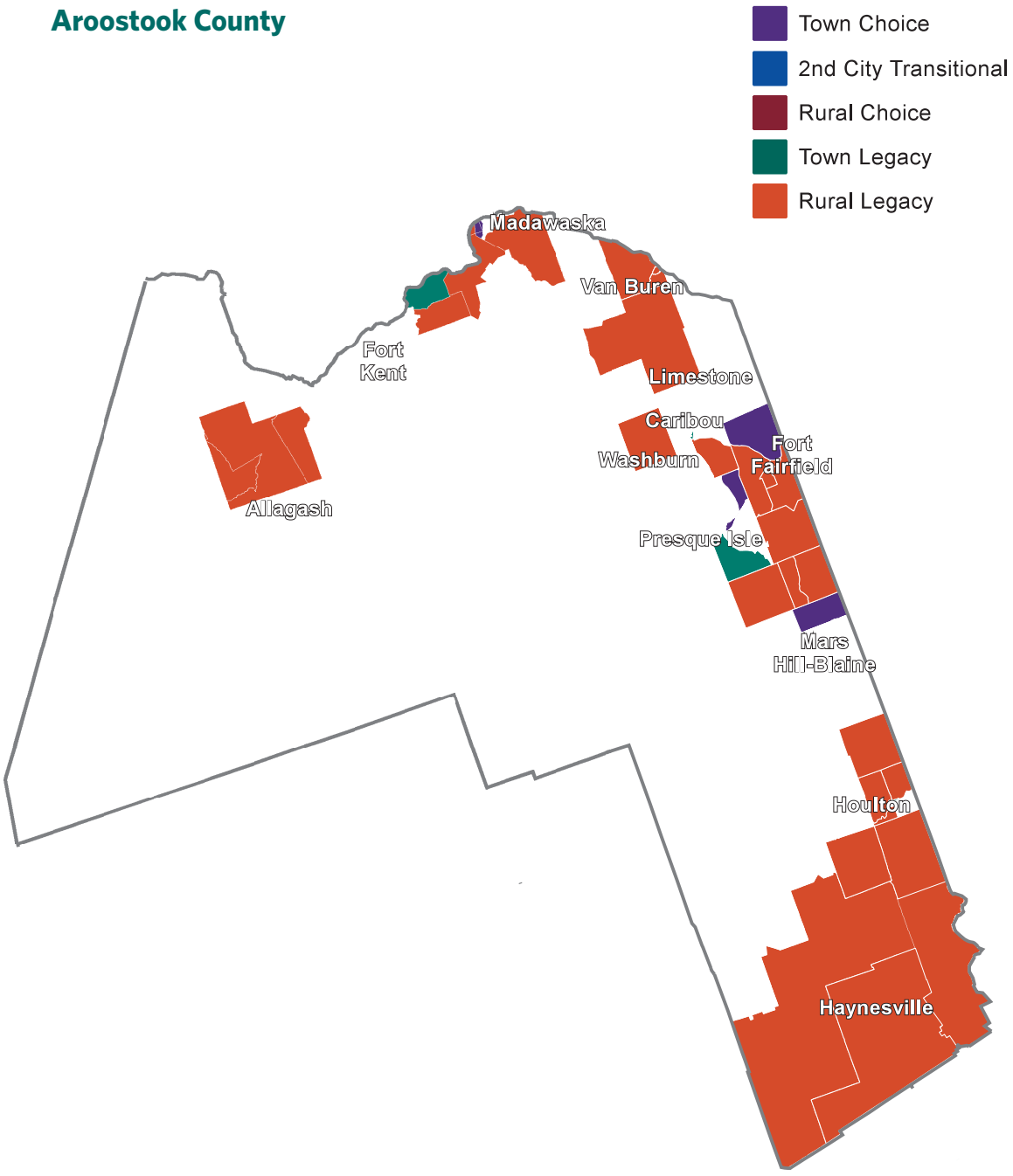
Note: White areas denote geographic areas that lack significant populations of any of the five target audiences.

Androscoggin County



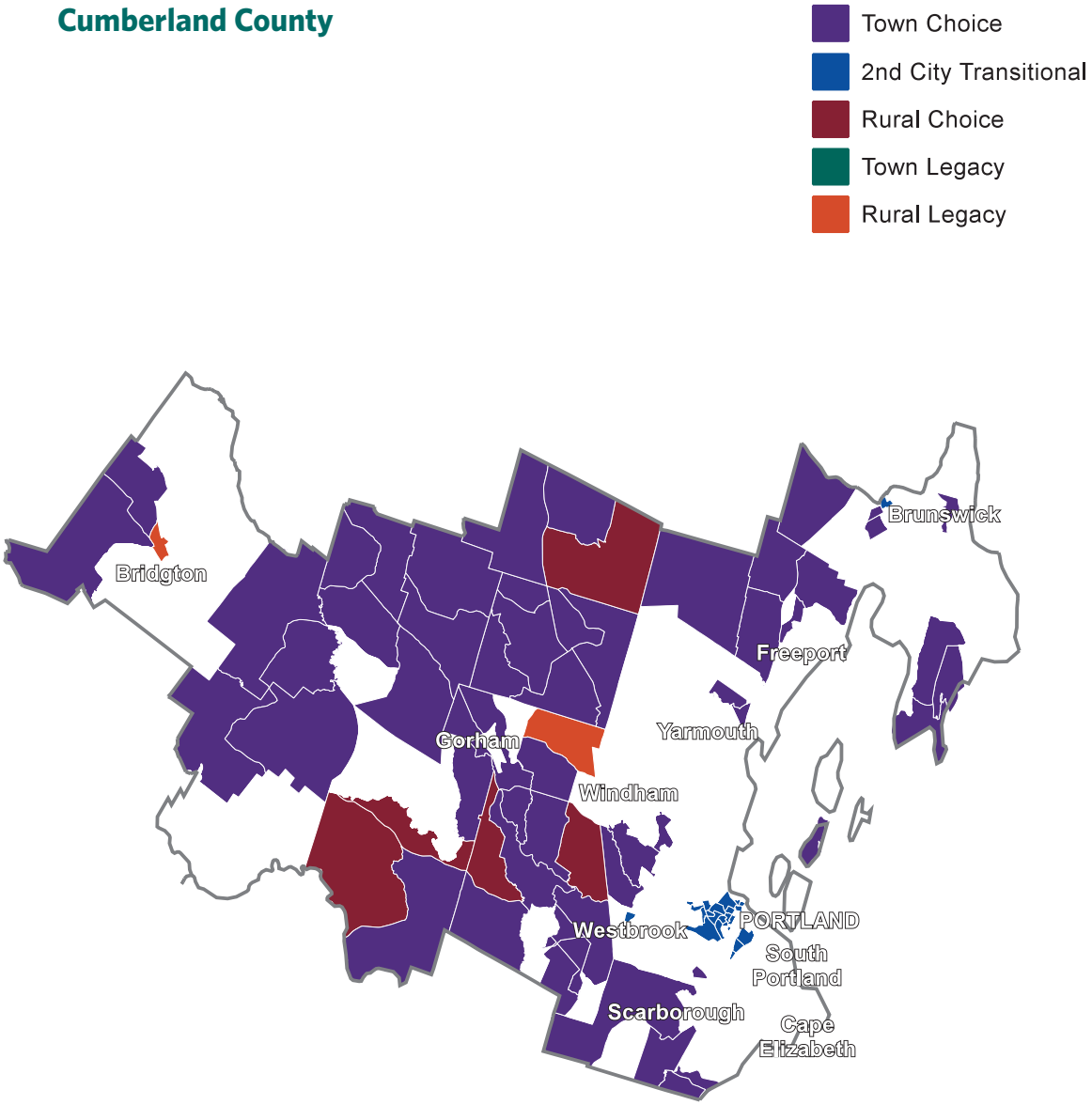
Note: White areas denote geographic areas that lack significant populations of any of the five target audiences.

Aroostook County



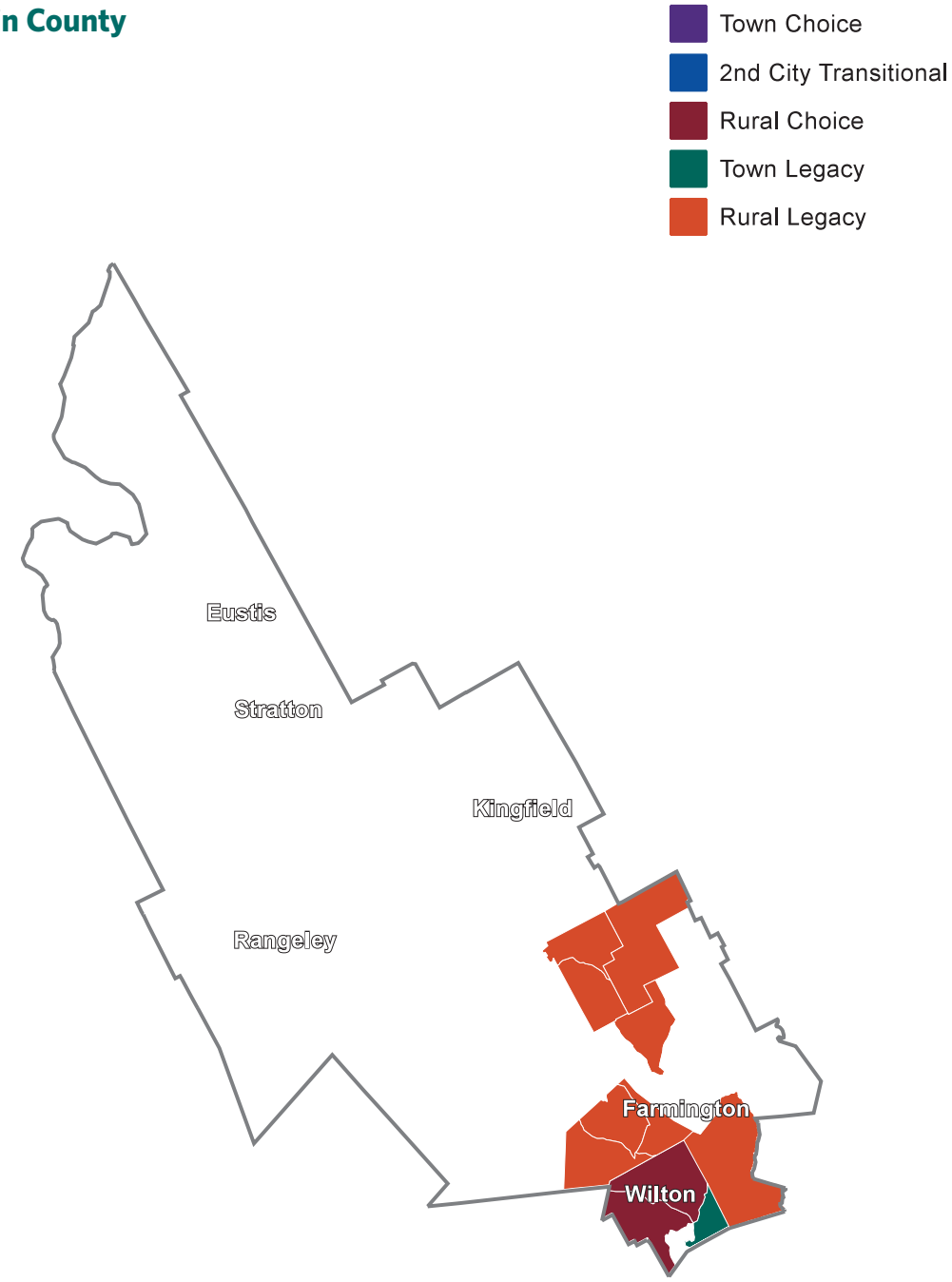
Note: White areas denote geographic areas that lack significant populations of any of the five target audiences.

Cumberland County



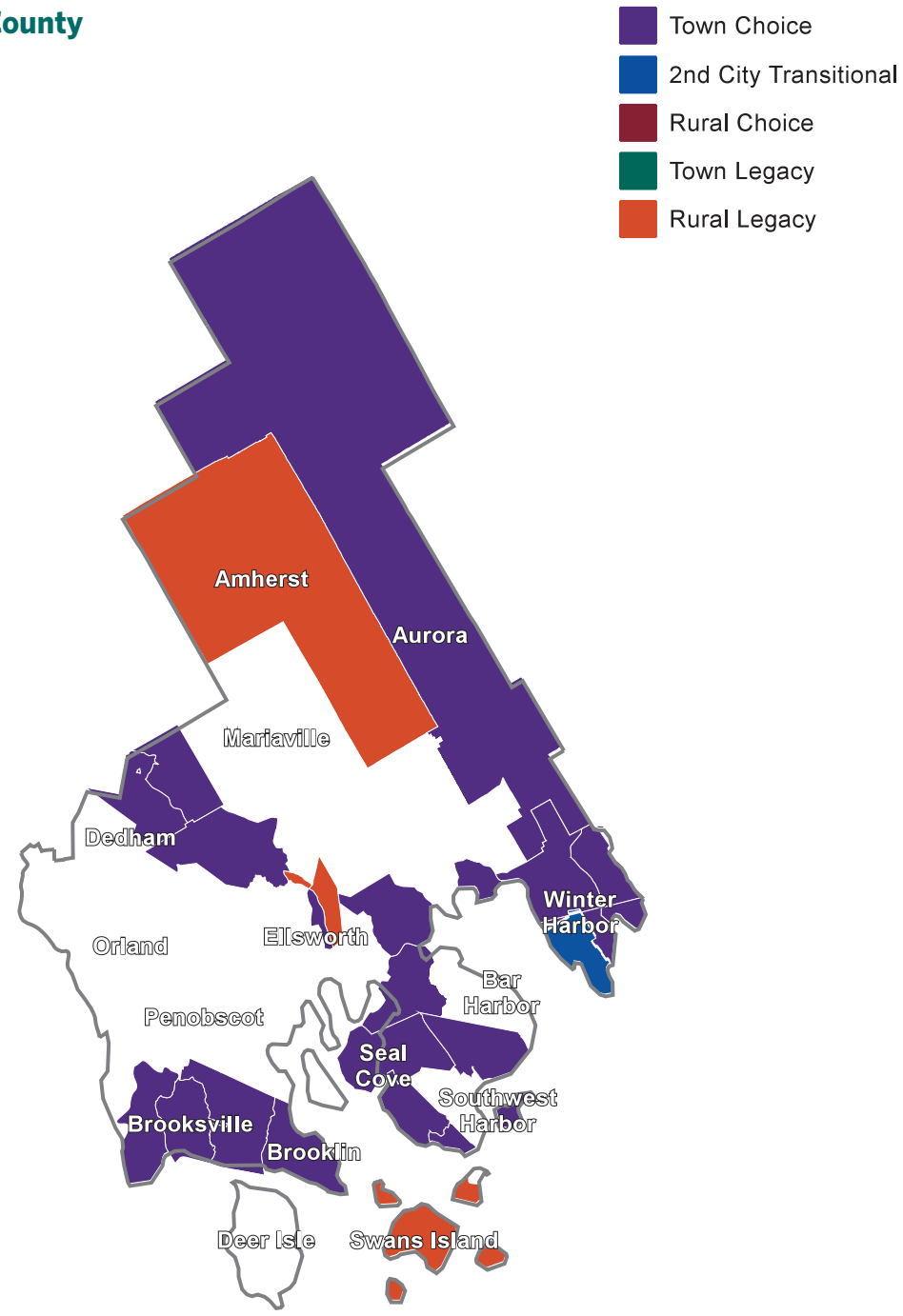
Note: White areas denote geographic areas that lack significant populations of any of the five target audiences.

Franklin County



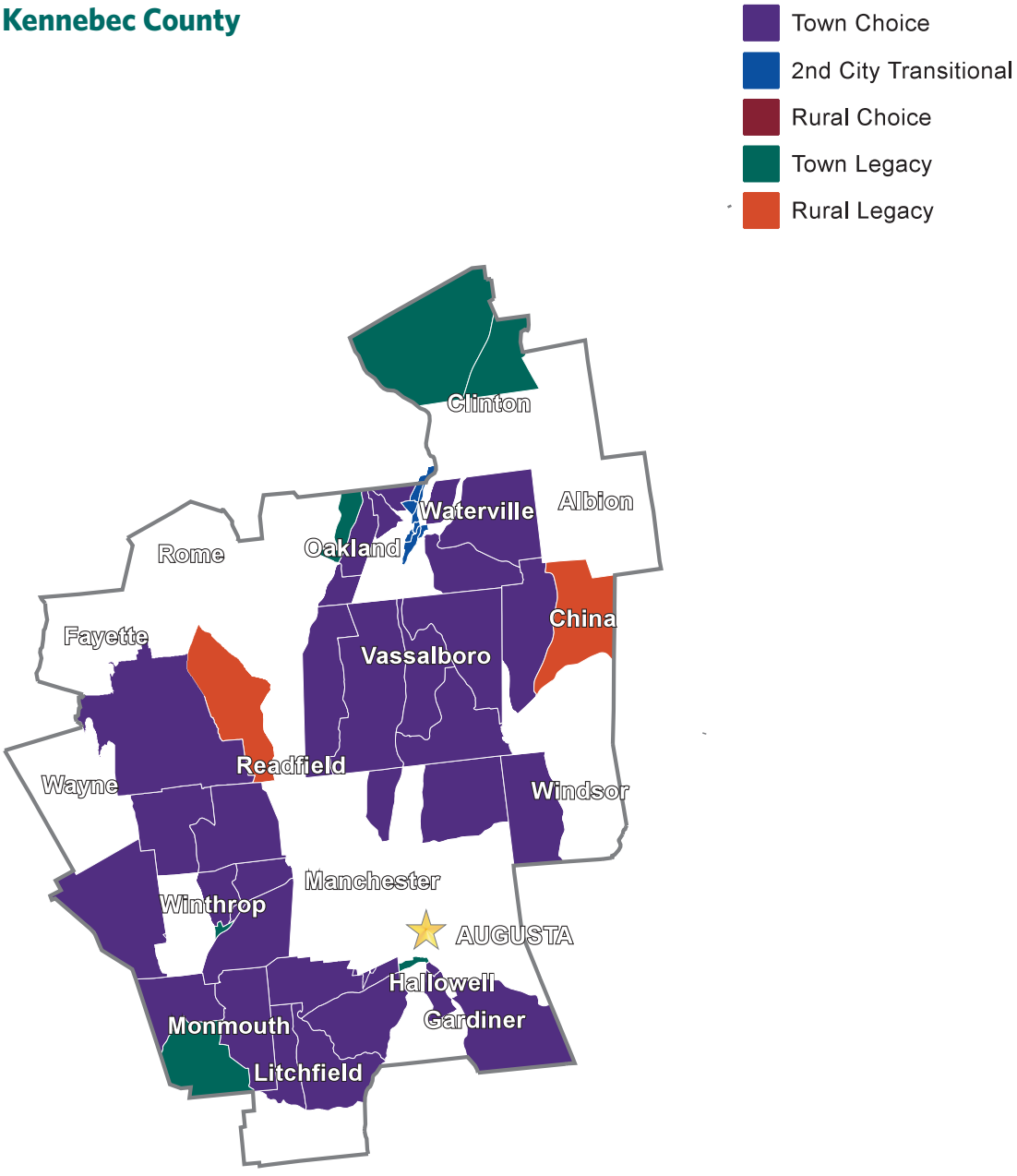
Note: White areas denote geographic areas that lack significant populations of any of the five target audiences.

Hancock County



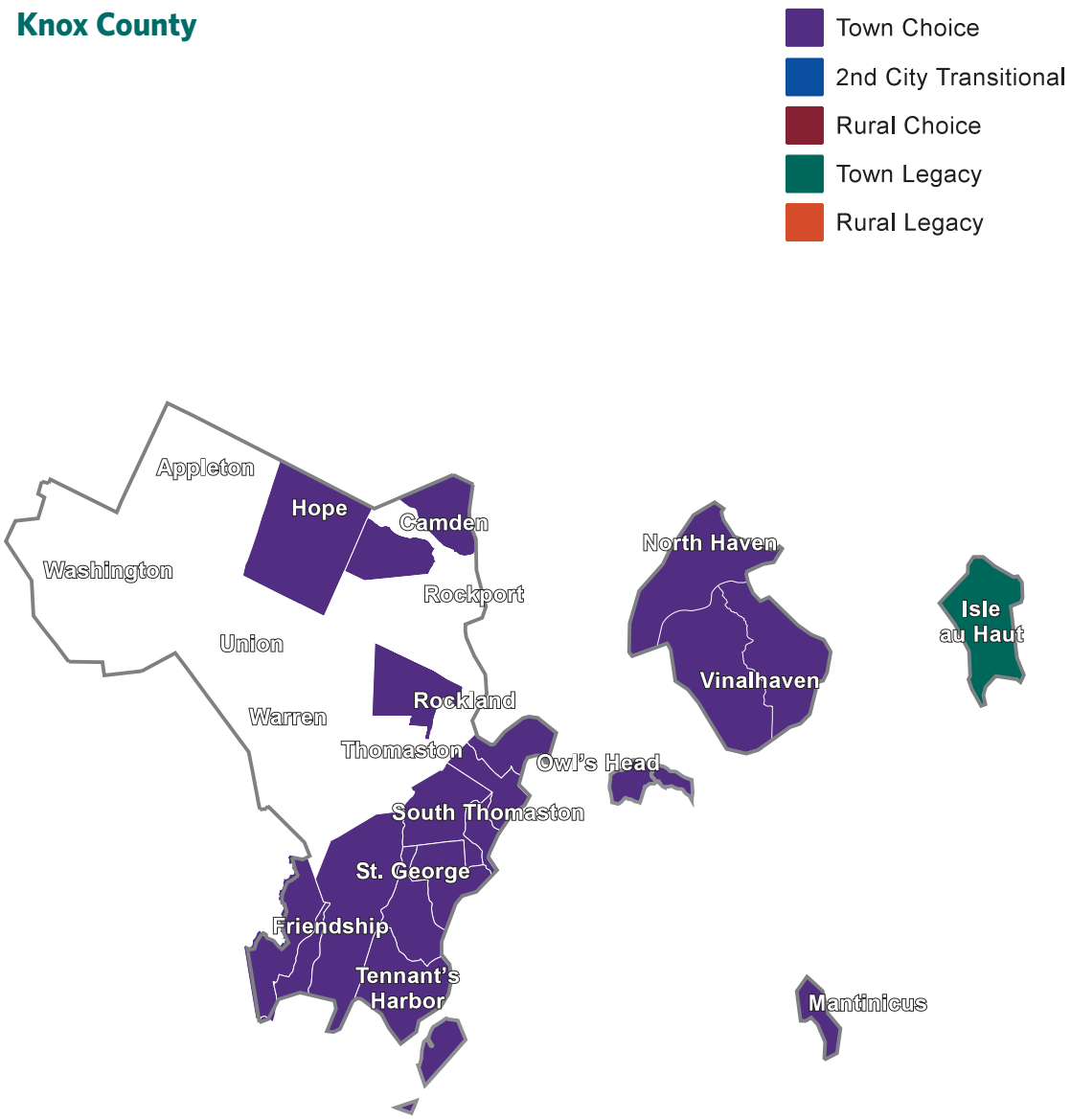
Note: White areas denote geographic areas that lack significant populations of any of the five target audiences.

Kennebec County



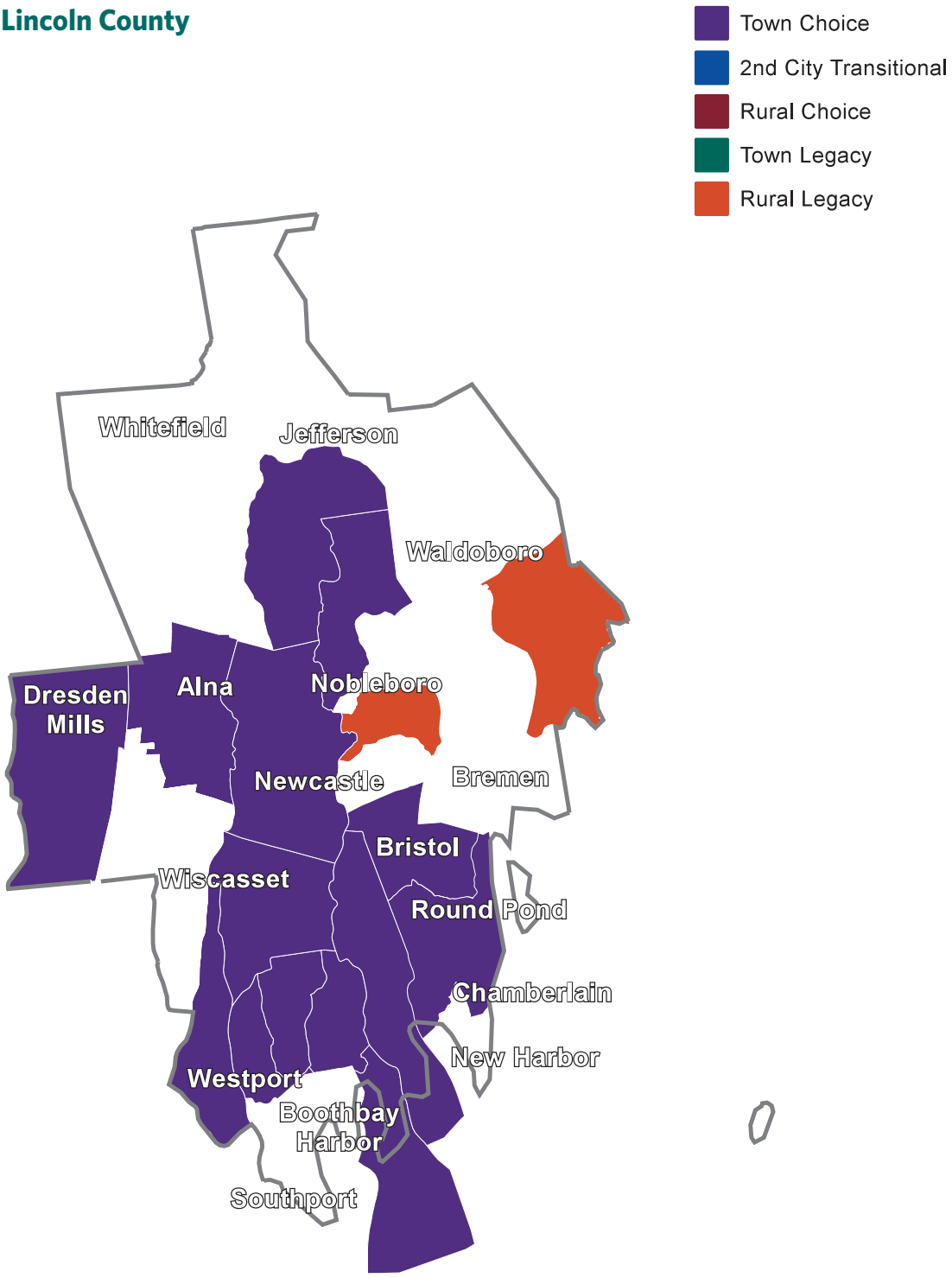
Note: White areas denote geographic areas that lack significant populations of any of the five target audiences.

Knox County



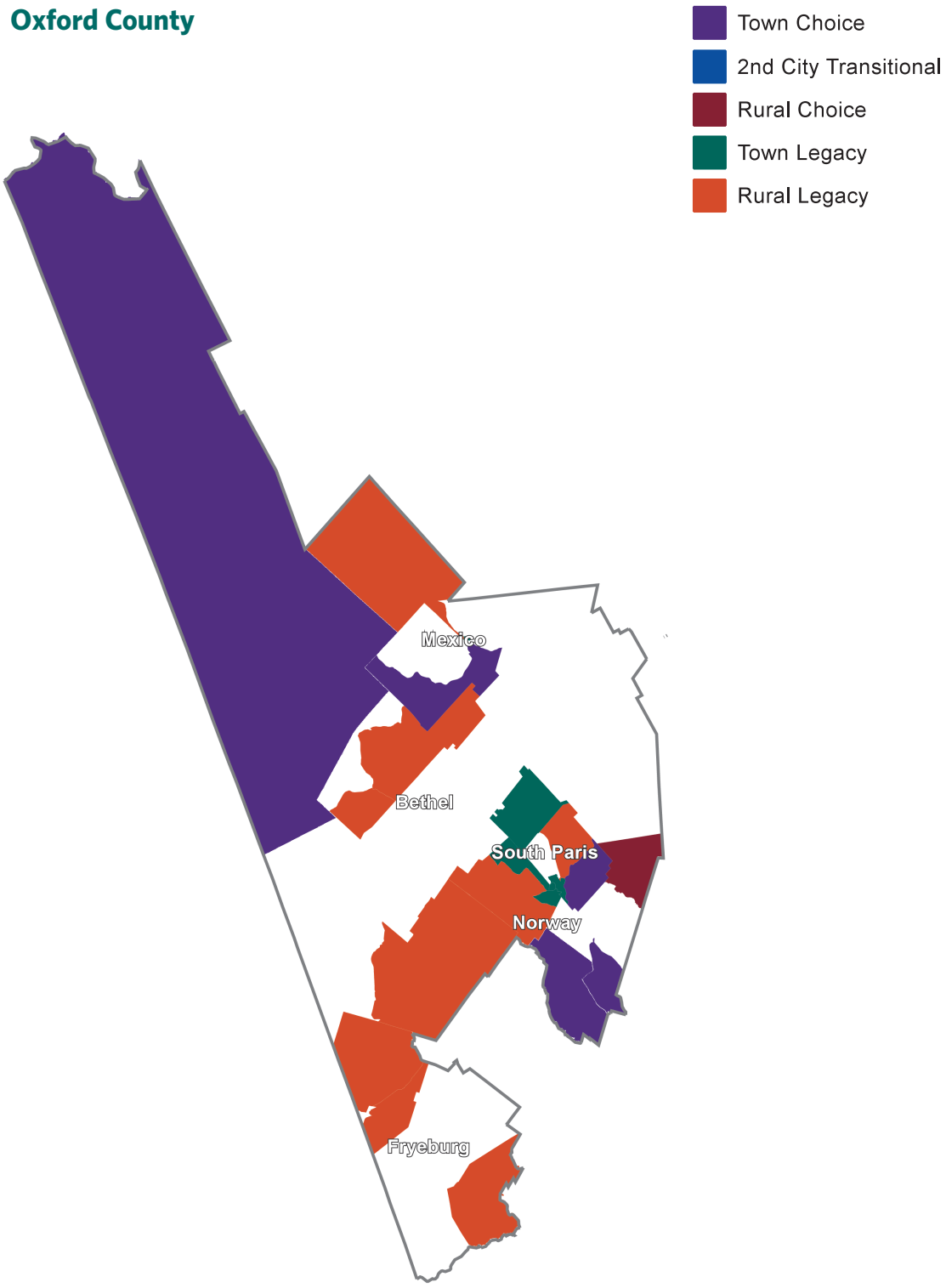
Note: White areas denote geographic areas that lack significant populations of any of the five target audiences.

Lincoln County



Note: White areas denote geographic areas that lack significant populations of any of the five target audiences.

Oxford County

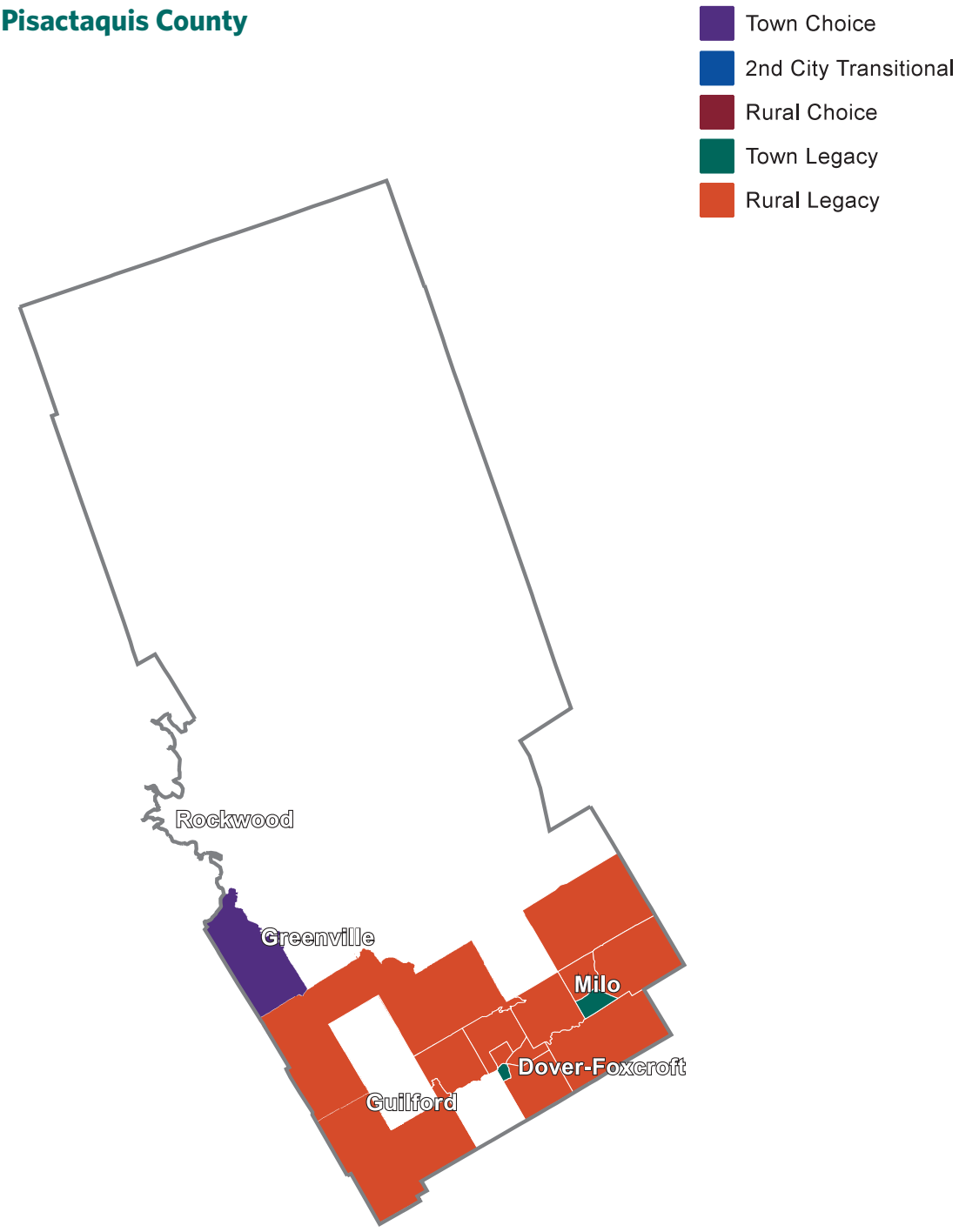


Note: White areas denote geographic areas that lack significant populations of any of the five target audiences.

Penobscot County

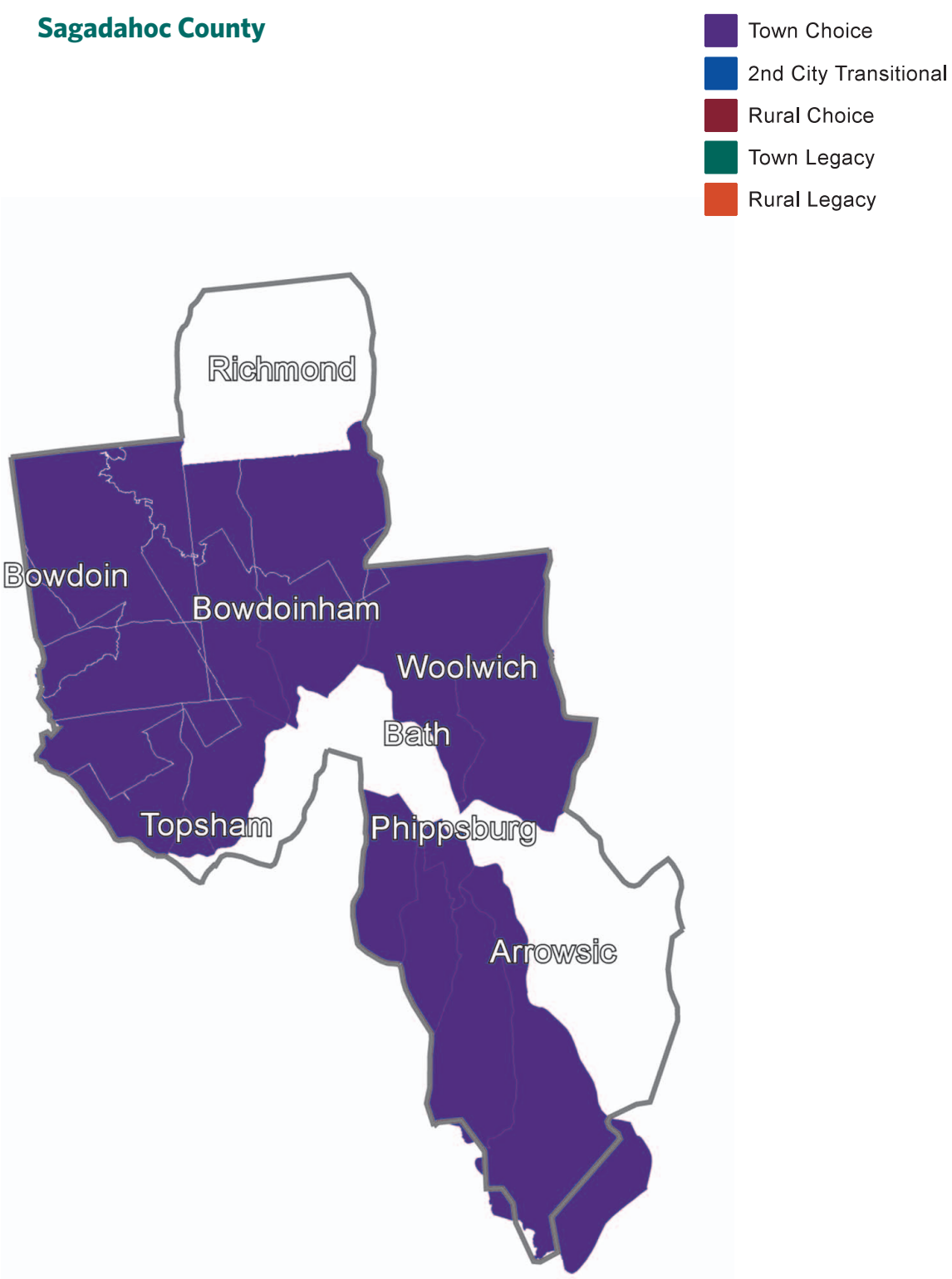
Note: White areas denote geographic areas that lack significant populations of any of the five target audiences.

Pisactaquis County



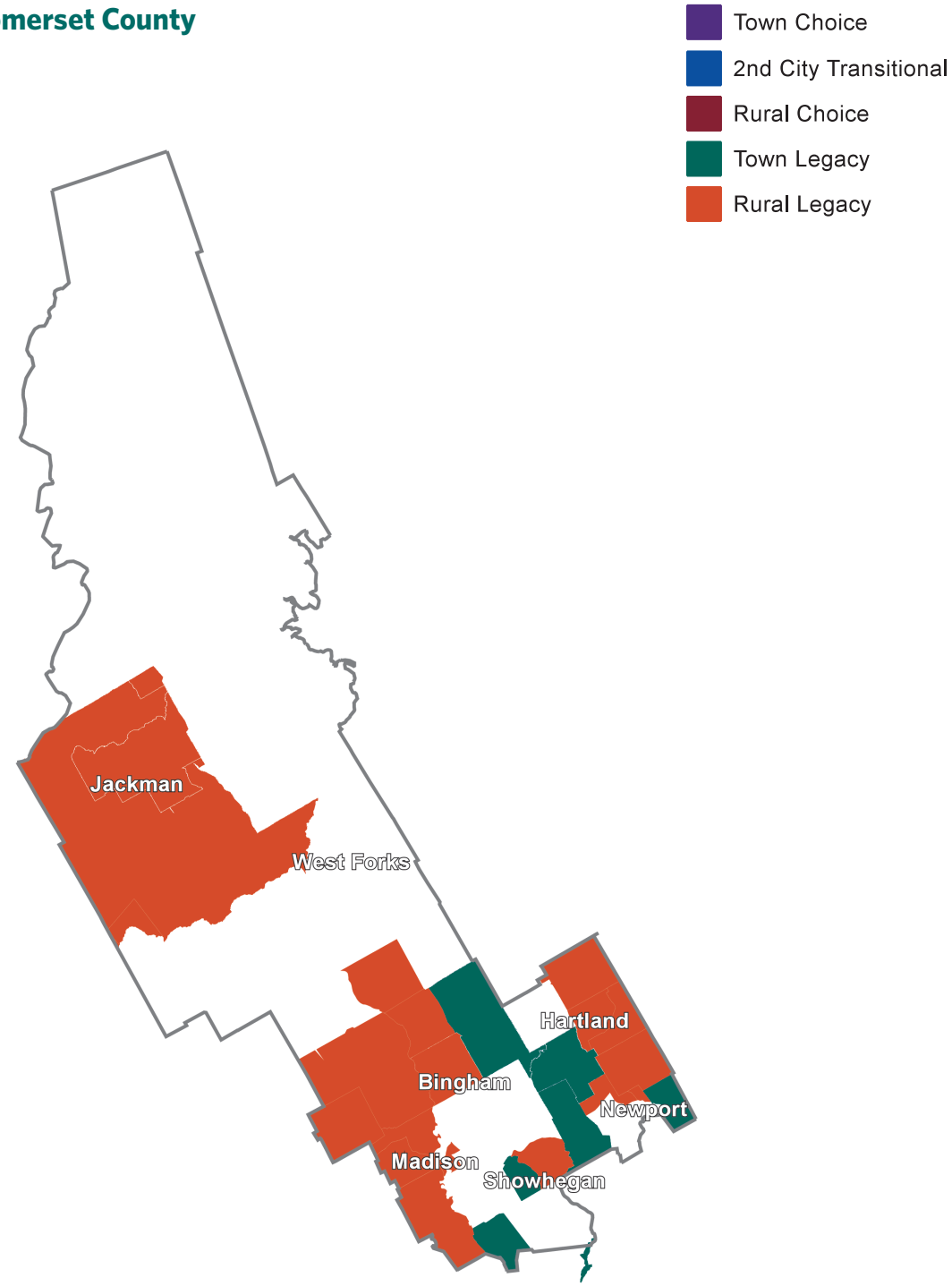
Note: White areas denote geographic areas that lack significant populations of any of the five target audiences.

Sagadahoc County



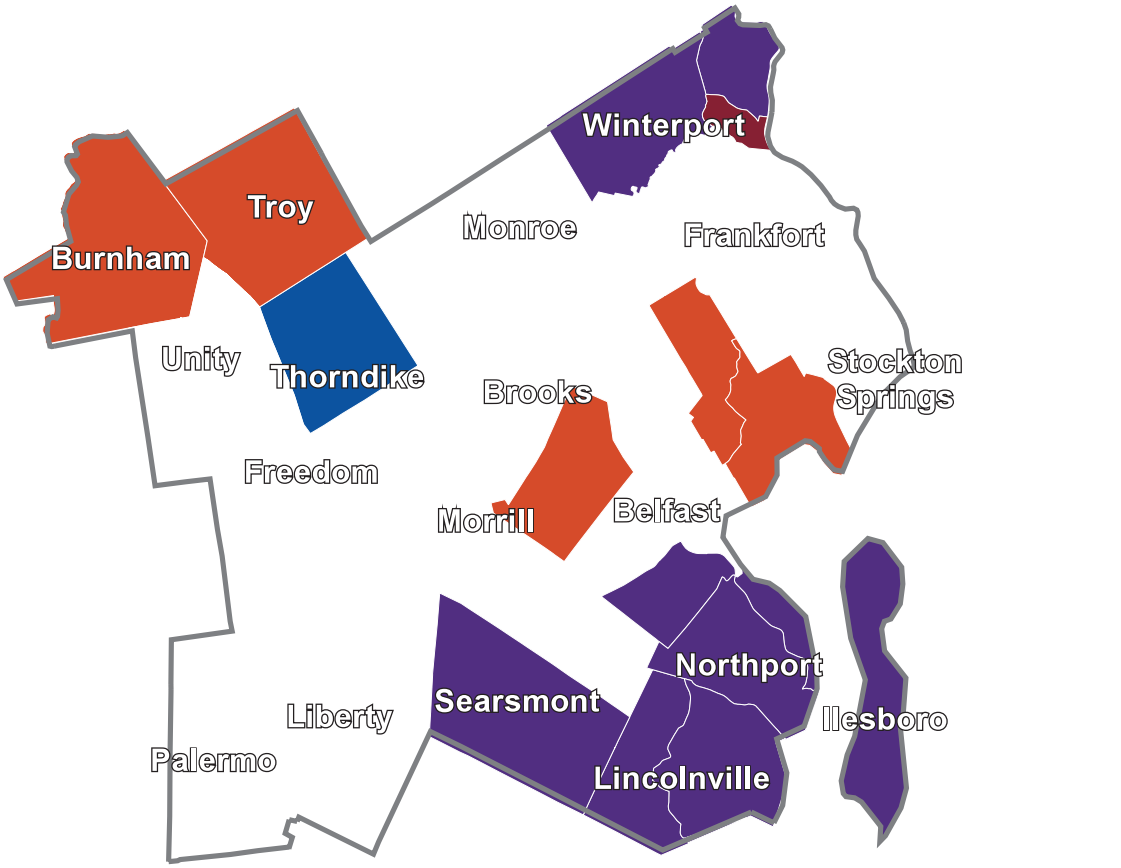
Note: White areas denote geographic areas that lack significant populations of any of the five target audiences.

Somerset County



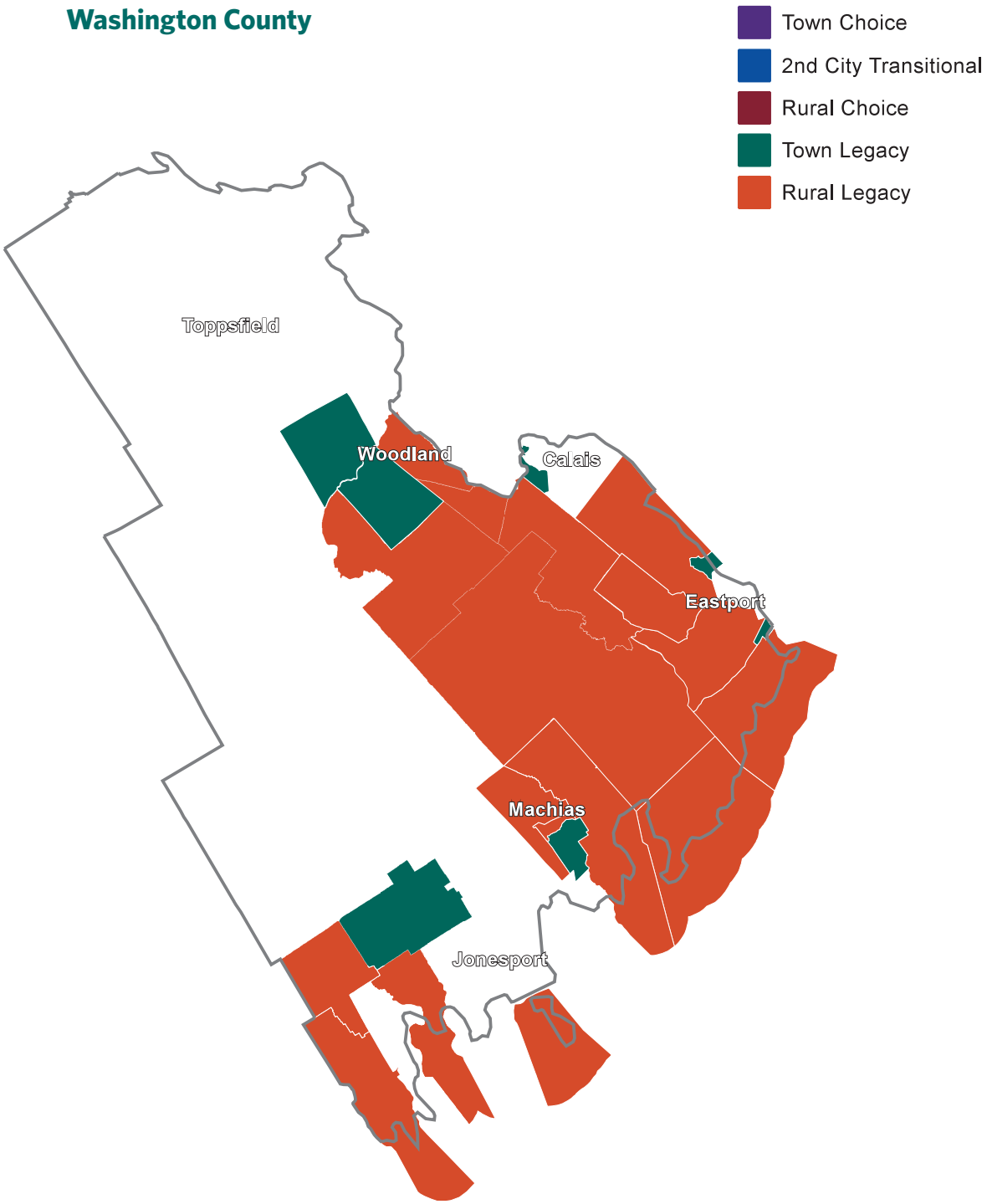
Note: White areas denote geographic areas that lack significant populations of any of the five target audiences.

Waldo County



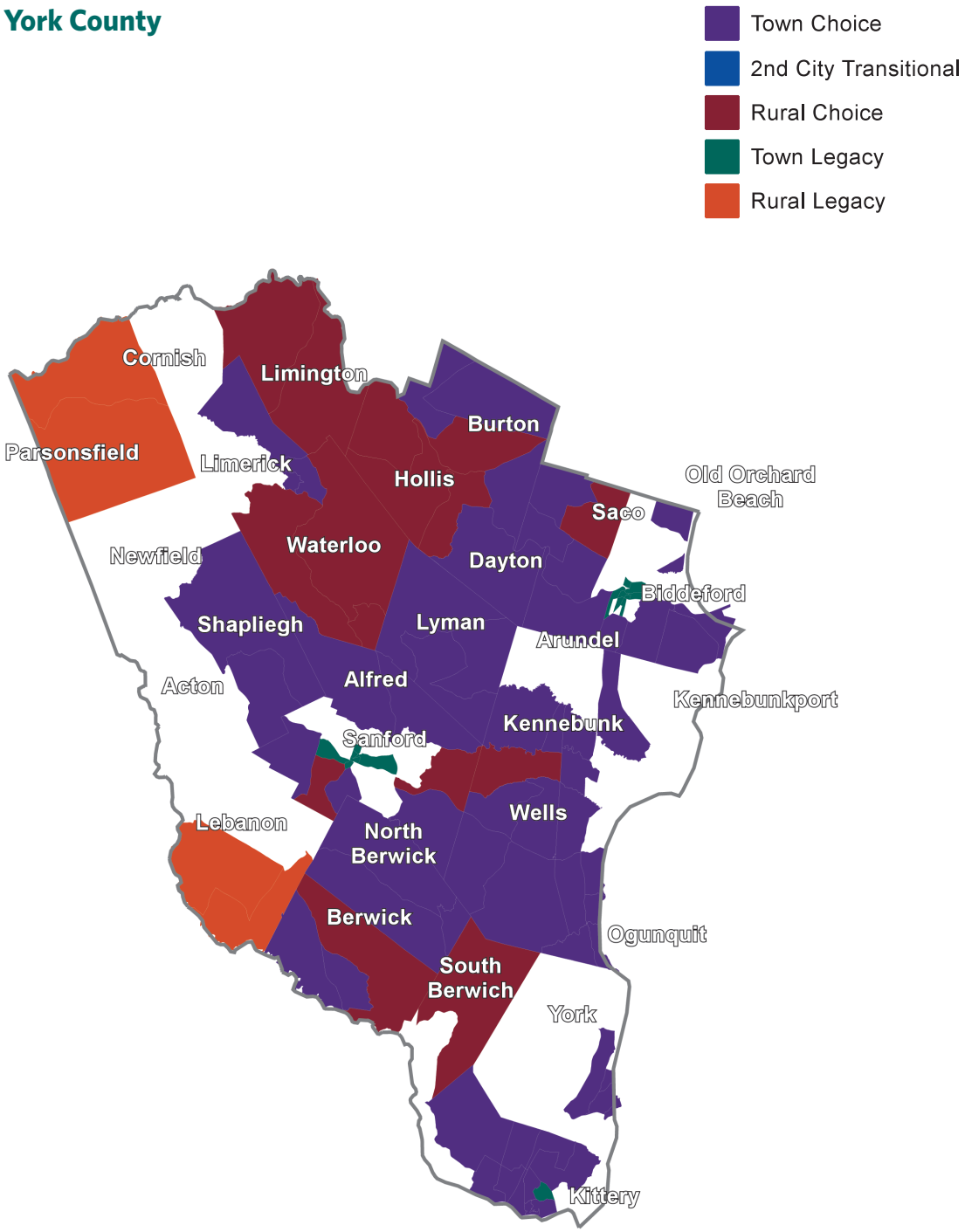
Note: White areas denote geographic areas that lack significant populations of any of the five target audiences.

Washington County



Note: White areas denote geographic areas that lack significant populations of any of the five target audiences.

York County



Note: White areas denote geographic areas that lack significant populations of any of the five target audiences.

APPENDIX G. IMMUNIZATION OUTREACH EDUCATION TOOLKIT

IMMUNIZATION OUTREACH EDUCATION TOOLKIT

The decision to fully vaccinate a child is often complex, with parents holding many conflicting opinions and ideas about vaccination and vaccines.

There are many ways you can reach out to parents, help them understand the importance of immunizations, and support their healthcare decisions.

KEEP MAINE'S CHILDREN SAFE AND HEALTHY

Immunizations keep Maine's children healthy, protecting them from dangerous diseases. In the last 50 years, childhood vaccination programs have prevented millions of deaths, improved hundreds of millions of lives, and saved billions of healthcare dollars.

But today, we face a growing problem.

Over the past decade, childhood vaccination rates have been falling in Maine, as in many other areas across the country, due to increased parental hesitancies to immunization. A recent estimate indicates that 20,000 children aged five or younger in Maine are exposed to the risk of contracting vaccine-preventable diseases.

Improving childhood vaccination rates has become a priority of state, local, and professional health and public health organizations.

Will you help us keep Maine's children safe and healthy?

REACH OUT TO FAMILIES

With this toolkit, you can help families in your area stay healthy!

There are many ways you can reach out to parents, help them understand the importance of childhood immunizations, and support their healthcare decisions. A good first step is to learn more about the families that live in your area. To develop an effective outreach and education campaign, follow the simple steps below:

Turn to page 4
to learn the reasons why some Maine parents chose to skip or delay childhood immunizations.

Turn to page 5
to learn about messages that help parents make the decision to vaccinate their children.

Turn to page 6
to learn about the different "audiences" for your outreach and education campaign.

Turn to page 7
to identify which types of parents with young children live in your area.

Turn to page 8
to determine what types of outreach activities are best to use with the parents in your area.

Access the enclosed CD
for templates of outreach tools and activities that you can customize to suit your needs.

THE DECISION TO VACCINATE

Recent surveys show that the majority of Maine parents believe in the health protection of childhood immunizations, the value of physician recommendations about vaccinations, and the risks posed to children by vaccine-preventable diseases. However, these surveys also show that parents whose children do not have all of their immunizations are less likely to share these beliefs.

WHAT IS AN ALTERNATIVE OR DELAYED SCHEDULE? Some parents choose not to follow the recommended vaccine schedule, and skip or delay some or all of their children's immunizations. This schedule leaves children vulnerable to dangerous diseases for a longer period of time than necessary and lacks medical benefit.

The decision to fully vaccinate a child is often complex, with parents holding many conflicting opinions and ideas about vaccination and vaccines. The most common barriers to parents fully vaccinating their children include:

- Believing vaccines are not safe
- Believing vaccines are not necessary to keep children healthy

For many parents, the issues of safety and necessity are intertwined. Parents who say that vaccinations are unnecessary for their children may actually feel the benefits of immunization are outweighed by perceived health risks. Safety and necessity concerns can also influence parents to choose an alternative or delayed immunization schedule.

Information about vaccination decisions and effective messages came from research conducted with parents of young children throughout the state by the Maine CDC's Maine Immunization Program. In 2007, parents were surveyed by phone and mail to identify barriers and incentives for immunizing their children. Building upon this research, intercept interviews were conducted in 2011 to both clarify survey data and test potential messages. To learn more about this research, visit: www.maine.gov/dhhs/mecdc/infectious-disease/immunization

COMMUNICATING WITH PARENTS ABOUT CHILDHOOD IMMUNIZATION

The most important message you can communicate to parents is to **talk to their healthcare provider** about their immunization concerns. Healthcare providers are responsible for the health and safety of their patients and are best equipped to answer parents' specific questions about vaccines, the vaccination schedule, and immunization.

When developing outreach materials, focus messages on the safety of vaccines and their necessity for children's health. Emphasize the importance of maintaining the CDC recommended immunization schedule and avoiding alternative or delayed schedules.

Pushy or scary messages don't work with Maine parents. Neither do messages that place immunization decisions in terms of "good" or "bad". Focus instead on the positive benefits of vaccines to child health and well-being.

The samples below—which are included as digital files on the enclosed CD—illustrate the types of messages and images that will be most effective with Maine parents.

ABOUT MAINE PARENTS

Families, like individuals, have personalities that influence how they receive information, perceive themselves and others, participate in their communities, and make decisions about their families' health. In Maine, these families can be organized into five groups called "target audiences". Successful outreach campaigns use strategies designed to motivate each target audience.

The target audiences of parents with young children in Maine include:

Town Choice: Middle-age, college-educated, upper-middle-income parents with small families. Town Choice enjoy interacting with others in their community, but make decisions based on their own analysis and interpretation of the evidence.

Rural Legacy: Middle-age, high-school-educated, lower-middle-income parents with several children. Rural Legacy make decisions using the "rules" they've learned from their life experiences to understand and organize the world around them.

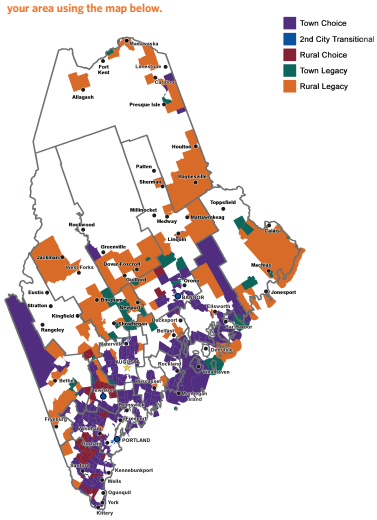
Town Legacy: Young, high-school-educated, low-income parents with large families. Town Legacy trust the advice of leaders in their family or community with similar life experiences to their own and will use that advice to guide their decisions.

Second City Transitional: Young, low-income parents with some college education and few or no children in the house. Second City Transitional make decisions based on the promise of immediate benefit for themselves and their families.

Rural Choice: Middle-age, upper-middle-income parents with some college education and several children in the house. Rural Choice use "rules"—derived from established traditions in religion, local economy, inter-family dynamics, etc.—to make decisions.

FAMILIES IN YOUR AREA

Identify the different target audiences living in your area using the map below.



MAINE TARGET AUDIENCES AT A GLANCE

Choose outreach strategies based on the kinds of families living in your community.

AUDIENCE	TOWN CHOICE	RURAL LEGACY	TOWN LEGACY	SECOND CITY TRANSITIONAL	RURAL CHOICE
PROFILE	Age 25–44 College graduates Upper-middle income Smaller family size	Age 25–44 High school graduates Lower-middle income Several children in the household	Younger than age 35 High school graduates Low income Larger family size	Younger than age 35 Some college education Low income Singles, couples, and smaller families	Age 25–44 Some college education Upper-middle income Several children in the household
LOCATION	Concentrated along the coast	Found throughout the state away from the coast	Found in parts of Western Maine and Aroostook and Washington Counties	Found primarily in Cumberland County	Found in York and Androscoggin Counties
TYPES OF OUTREACH	Print (mailers, newspapers, magazines, banners, posters, brochures, etc.) Electronic (listservs, emails, websites, web banners, phone calls) Event (discussions, sporting events, movie previews, celebrity appearances, etc.)	Print (mailers, newspapers, brochures, posters, yard signs, etc.) Electronic (emails, websites, web banners, listservs, phone calls) Event (celebrity appearances, political events, art/cultural events, etc.).	Print (mailers, newspapers, point of purchase displays, brochures, etc.) Electronic (emails, phone calls/ messages) Event (discussions, award ceremonies, art/cultural events, etc.)	Print (newspapers, mailers, yard signs, banners, posters, point of purchase displays, etc.) Electronic (phone calls, emails, websites, web banners, listservs, text messages) Event (discussions, civic events, educational events, etc.)	Print (mailers, brochures, point of purchase displays, magazines, etc.) Event (art/cultural events, award ceremonies, celebrity appearances, etc.)
SUGGESTED STRATEGIES	Email series from expert source, with opportunity for parent feedback loop Newspaper Op-Ed's by experts	Local "celebrity" (political, church, etc.) endorsement "Lead by example" campaign including stories from local influential figures	"Good neighbor" peer-to-peer campaign sharing immunization information Community-based events such as town days	Advertisements in independent local media Social media campaign	Family outdoors/sporting event promotion Mailer with emotional appeal

READY TO START HELPING KEEP MAINE CHILDREN HEALTHY?

Start planning your outreach campaign using the information in this toolkit and on the enclosed CD. If you do not have a lot of experience with performing outreach, don't worry—it's easier than you think! Remember to:

1. Identify the area that you would like to focus on for your outreach activities.
2. Identify the Target Audience families living in those areas using the map on page 7 and gain more in depth information using the county specific maps on the enclosed CD.
3. Determine what types of outreach activities are best for the Target Audience families in your area using the chart on page 8 and gain more in depth information using the Target Audience profiles on the enclosed CD.
4. Plan events and create materials for your Target Audience families. Use the sample materials on the enclosed CD to guide you, such as:
   - Sample posters,
   - Sample media pitch, and
   - Sample newsletter items.

To learn more about this campaign, contact the Maine Immunization Program at 207-287-3746 or visit www.maine.gov/dhhs/mecdc/infectious-disease/immunization