

## Free and Reduced-Price Meal Application and Income Verification Practices in School Nutrition Programs in the United States

Junehee Kwon, PhD, RD; Yee Ming Lee, PhD, RD, CHE; Eunhye Park, MS;  
Yujia Wang, MS; Keith Rushing, PhD, RD

### ABSTRACT

#### Purpose/Objectives

This study assessed current practices and attitudes of school nutrition program (SNP) management staff regarding free and reduced-price (F-RP) meal application and verification in SNPs.

#### Methods

Stratified, randomly selected 1,500 SNP management staff in 14 states received a link to an online questionnaire and/or a printed questionnaire, which was developed based on interviews of 25 SNP directors regarding F-RP meal application and pilot-tested. Descriptive statistics, chi-square analyses, and t-tests were calculated using SPSS, with  $p < 0.05$ .

#### Results

Of 319 SNP management staff (21.3%) who provided usable data, 175 (54.9%) accepted paper-based F-RP meal applications only, while 106 (33.2%) accepted both paper-based and online applications. In school districts where paper-based F-RP meal applications were received, more temporary employees ( $n = 17$ , 5.3%) or bookkeepers or secretaries ( $n = 89$ , 27.9%) processed applications than in districts accepting online applications ( $n = 6$  [1.9%] or  $n = 43$  [13.5%], respectively). The mean number of acceptable documents for verification was fewer ( $p < 0.001$ ) in small districts ( $2.9 \pm 1.3$ ) than in large districts ( $3.4 \pm 1.0$ ), and more small districts accepted “paysubs only” as an acceptable form of income verification. About 11.9% ( $n = 38$ ) of participants perceived the current verification process inadequate because of omitted income documentations ( $n = 22$ , 6.9%), the cumbersome verification process ( $n = 5$ , 1.6%), 3% random verification being insufficient ( $n = 5$ , 1.6%), and the low response rate ( $n = 6$ , 1.9%).

#### Applications to Child Nutrition Professionals

F-RP application and verification requires significant labor resources, and accepting paysubs and court documents only for income verifications may result in over-certification. If SNPs are able to accept both online and paper-based applications, encouraging parents to complete online applications may reduce staff efforts and improve accuracy. Using Supplemental Nutrition Assistance Program award letters or documents which make it hard to underreport income sources may also improve accuracy.

**Keywords:** National School Lunch Program; child nutrition; free and reduced-price (F-RP) meal applications; F-RP meal verification

## INTRODUCTION

The National School Lunch Program (NSLP) and the School Breakfast Program (SBP) play an integral part in the strategic goals of the U.S. Department of Agriculture (USDA) by ensuring that all U.S. children have access to safe, nutritious, and balanced meals (USDA Food and Nutrition Service [FNS], 2013). The average number of lunches served daily through the NSLP was 30.5 million in the 2015 academic year (USDA FNS, 2016a). Of those, 72.1% were free or reduced-price (F-RP) lunches, and these percentages appear to be continually increasing (USDA FNS, 2016a). In addition, the SBP served a daily average of 14.1 million meals with a higher proportion of F-RP meals (85.1%) than the NSLP (USDA FNS, 2016b). Depending on income and the number of family members in each household, students whose household income is at or below 130% of the poverty level are eligible to receive free meals, and those whose household income is between 130% and 185% of the poverty level are eligible for reduced-price meals (United States Government Publishing Office, 2016). This process of assessing and approving each applicant's eligibility to receive free or reduced-price meals is termed 'certification', and school district's assessment of accuracy of their certification decision is termed 'verification' (USDA FNS, 2015a).

In 2015 the total federal reimbursement expenditure for the NSLP was \$11.7 billion and \$3.9 billion for the SBP (USDA FNS, 2016c). The cost of these programs is continually increasing and so is the percentage of F-RP meals in the U.S (USDA FNS, 2016a, 2016c). This trend indicates the importance of these programs for the health and well-being of U.S. children. However, the large number of payment errors has raised concerns for many years (Improper Payments Information Act, 2002; USDA FNS, 2015a). The Second Access, Participation, Eligibility, and Certification (APECII) Study (USDA FNS, 2015a) revealed significant payment errors for school nutrition programs (SNPs). Certification errors, meal-claiming errors, and aggregate errors were identified costing the federal government more than \$1.16 billion (9.8% of the total expenditure) for the NSLP and \$336 million (11.0% of the total expenditure) for the SBP during the 2012–2013 academic year (USDA FNS, 2015a). Although the amount of improper payments continues to be significant, these 2015 figures for improper payment (USDA FNS, 2015a) demonstrated some improvement in comparison to the 2013 report, which showed \$1.77 billion (15.7%) of improper payments for the NSLP and \$831 million (25.3%) for the SBP (USDA, 2013).

The majority (80%) of these payment errors were certification errors that resulted in providing higher levels of benefits than that to which the recipients were entitled (over-certification). Further, two-thirds of the certification errors in 2012–2013 were due to household reporting errors (USDA FNS, 2015a). In response to the large number of improper payment errors, the Healthy, Hunger-Free Kids Act (HHFKA) of 2010 includes methods for improving the accuracy of the certification process (USDA FNS, 2016d). Some examples include increasing direct certification for free meals using Supplemental Nutrition Assistance Program (SNAP) data; increasing parents' response rates for application verification requests; reinforcing requirements for monitoring school food authority to ensure the accuracy of F-RP meal applications, application processing, and identification of reimbursable meals; and providing an alternative system, such as the Community Eligibility Provision (CEP), for low-income communities (USDA FNS, 2015a). Other reinforcement strategies such as imposing fines and establishing professional standards for school nutrition (SN) personnel have also been discussed and implemented (USDA FNS, 2015a).

While a number of strategies to improve aforementioned errors were suggested, current literature lacks data demonstrating current practices related to F-RP meal application and verification in SNPs. Therefore, this research was conducted to assess how F-RP meal applications were processed. Specific research objectives included the following: 1.) Determine the key activities and personnel involved in F-RP meal application and verification procedures in SNPs that are not participating in CEP throughout the U.S.; 2.) Describe operational challenges with F-RP meal application procedures; 3.) Describe the differences in F-RP meal application and verification procedures between small and large school districts; and 4.) Make recommendations for SNPs and government and professional organizations to improve F-RP meal application and verification processes.

## METHODOLOGY

The Institutional Review Board at Kansas State University and Auburn University approved the study protocol. This study was conducted in two phases. Phase 1 included individual interviews with state and district-level SNP directors, and Phase 2 included a national survey of district school nutrition program (SNP) management staff. Participants in both phases of the research were selected from 14 states, two states from each of the seven USDA regions. Researchers identified the 14 states purposefully based on population sizes; specifically selecting two states with the largest and smallest populations from each of the seven USDA regions. The combined population of these states reflected 47% of the total U.S. population.

### **Phase 1: Individual Interviews with State and District-Level School Nutrition Program Directors**

Individual interviews were used in Phase 1 to aid in developing the survey instrument. This was done primarily because limited research has been published on free and reduced-price (F-RP) meal application procedures across the U.S. Fourteen state agency child nutrition directors and 25 district-level SNP directors from 14 states were interviewed to explore a range of activities related to F-RP meal application and verification systems used in SNPs. In addition, six site visits were conducted in Alabama and Kansas to increase understanding of these processes. Specifically, researchers inquired about sequential flow of information, activities, or personnel in regards to F-RP meal applications and verifications. Findings from interviews and site visits were summarized and used for questionnaire development in Phase 2.

### **Phase 2: National Survey of District School Nutrition Program Directors across the U.S.**

**Participant selection.** State agency child nutrition directors provided a list of SNP management staff and their contact information for researchers to use when selecting a stratified random sample. Based on the number of NSLP participants in the 14 states, approximate numbers of individuals from each state to be included in the sample of 1,500 were determined. From the complete list of SNP contacts, districts participating in the Community Eligibility Provision (CEP), where household applications are not collected to determine eligibility for school meal programs, were removed, and the rest were sorted based on the enrollment number. Then, every  $n^{\text{th}}$  name depending on the number of participants needed from each state was selected and included in the sample, when  $n$  equals the total number of SNPs in each state divided by the number of participants needed from each state in the sample.

**Research instrument development.** A questionnaire was developed based on the findings from Phase 1 and reviewed by state agency child nutrition directors and foodservice management experts for content validity. A pilot study was conducted with a convenience sample of 20 SNP

management staff not included in the study sample. Because of the descriptive nature of the survey questions, internal consistency (inter-item reliability) was not measured or established. Participants in the pilot study were asked to complete the survey and to rate the clarity of instructions and questions. Revisions were made based on the feedback received, and the questionnaire was converted to an online format using the Kansas State University Qualtrics survey system. A compatible paper-based, booklet-type questionnaire was also printed.

**Data collection and analysis.** An email invitation with a link to the final questionnaire was sent to 1,500 SNP management staff in 14 states, followed by two reminder emails to maximize the response rate. To increase the participation of management staff in small SNPs or charter, private, and parochial schools where a computer system may not be as readily available, an additional 500 printed surveys were mailed with postage-paid self-addressed envelopes.

Data analyses were conducted using SPSS (version 20.0). Descriptive statistics such as frequencies, means and standard deviations, and cross-tabulations with chi-square analyses were used to summarize the data and assess associations between categorical variables. Independent sample *t*-tests were conducted to assess the impact of school district size and demographics on F-RP meal application procedures in SNPs throughout the U.S.

## RESULTS AND DISCUSSION

Of the 1,500 SNP management staff who were invited to participate in the survey, 319 (21.3%) from all seven regions provided usable data for analyses. Nearly 87% of the respondents were female ( $n = 277$ ), and 40.4% ( $n = 129$ ) were in the 50-59-year-old age group. A total of 104 (32.6%) held a bachelor's degree and 220 (69%) were currently working as school nutrition program (SNP) directors at the district level. The average number of years of work experience in SNPs was  $16.3 \pm 10.0$  years with 36.9% ( $n = 118$ ) with  $\leq 10$  years of work experience followed by 31.6% ( $n = 101$ ) with 11–20 years.

The majority of respondents ( $n = 271$ , 84.3%) worked for public schools while an almost equal number of participants indicated they worked either for charter ( $n = 22$ , 6.9%) or private ( $n = 24$ , 7.5%) schools. More than 50% ( $n = 175$ ) of the respondents worked for small districts (<2,500 students enrolled) and 109 (34.2%) for medium-sized districts (2,500–9,999 students) (Table 1). The mean overall participation rate for the NSLP in this study was 60.0%, and the mean rate for F-RP meals was 50.5%. These percentages were lower than the national average of 72.6% participation and 72.1% F-RP meals (Food Research and Action Center [FRAC], 2015; USDA FNS, 2016a). These differences may be due to the fact that schools with CEP were excluded in the study sample by design.

### **Paper-based vs. Online Free and Reduced Price Meal Application Systems**

Respondents were asked about free and reduced-price (F-RP) meal application and verification processes because a large proportion of errors were due to certification errors and mistakes in reported household income (USDA FNS, 2015a). The majority ( $n = 281$ , 88.1%) of the school districts used paper-based F-RP meal applications. Of those districts, 175 (54.9%) accepted only paper-based F-RP meal applications, and 106 (33.2%) received paper-based and online applications. Thirteen SNPs (4.1%) accepted only online F-RP meal applications (Table 2).

**Table 1. Demographic Characteristics of Survey Respondents and School Districts (N = 319)**

<b>Characteristics of School Respondents</b>	<i>n</i>	%
<b>Gender</b>		
Male	42	13.2
Female	277	86.8
<b>Age</b>		
20 – 29 years old	5	1.6
30 – 39 years old	46	14.4
40 – 49 years old	66	20.7
50 – 59 years old	129	40.4
≥ 60 years old	73	22.9
<b>Degree of education</b>		
High school or GED	35	11.0
Some college	78	24.5
Associate degree	25	7.8
Bachelor's degree	104	32.6
Graduate degree (Master's or Doctoral)	71	22.3
Other	6	1.9
<b>Current job title</b>		
Director of Child Nutrition Program in a school district	220	69.0
Manager of a Child Nutrition Program of a single school	30	9.4
Coordinator of Child Nutrition Program over several schools	17	5.3
Other	52	16.3
<b>Work experience in school nutrition programs (<i>M</i> ± <i>SD</i> = 16.3 ± 10.0 Years)</b>		
≤ 10 years	118	36.9
11 – 20 years	101	31.6
21 – 30 years	70	21.9
≥ 31 years	30	9.4
<b>Characteristics of School Districts</b>		
<b>State locations in FNS regions</b>		
Southwest (New Mexico and Texas)	93	29.1
Western (Alaska and California)	76	23.8
Midwest (Illinois and Minnesota)	39	12.2
Northeast (New York and Vermont)	37	11.6
Southeast (Alabama and Florida)	31	9.7
Mid-Atlantic (Delaware and Pennsylvania)	28	8.8
Mountain Plains (Missouri and Wyoming)	15	4.7
<b>School type</b>		
Public school	271	84.3
Private school	24	7.5
Charter school	22	6.9
Public-Charter	4	1.3

**Table 1.** (Continued).***Demographic Characteristics of Survey Respondents and School Districts (N = 319)***

<b>Characteristics of School Districts</b>	<i>n</i>	%
<b>School size</b>		
Small (<2,500)	175	54.9
Medium (2,500-19,999)	109	34.2
Large (20,000-39,999)	18	5.6
Mega ( $\geq 40,000$ students)	17	5.3
<b>Type of lunch operation</b>		
Self-operated	280	87.8
Contract	39	12.2

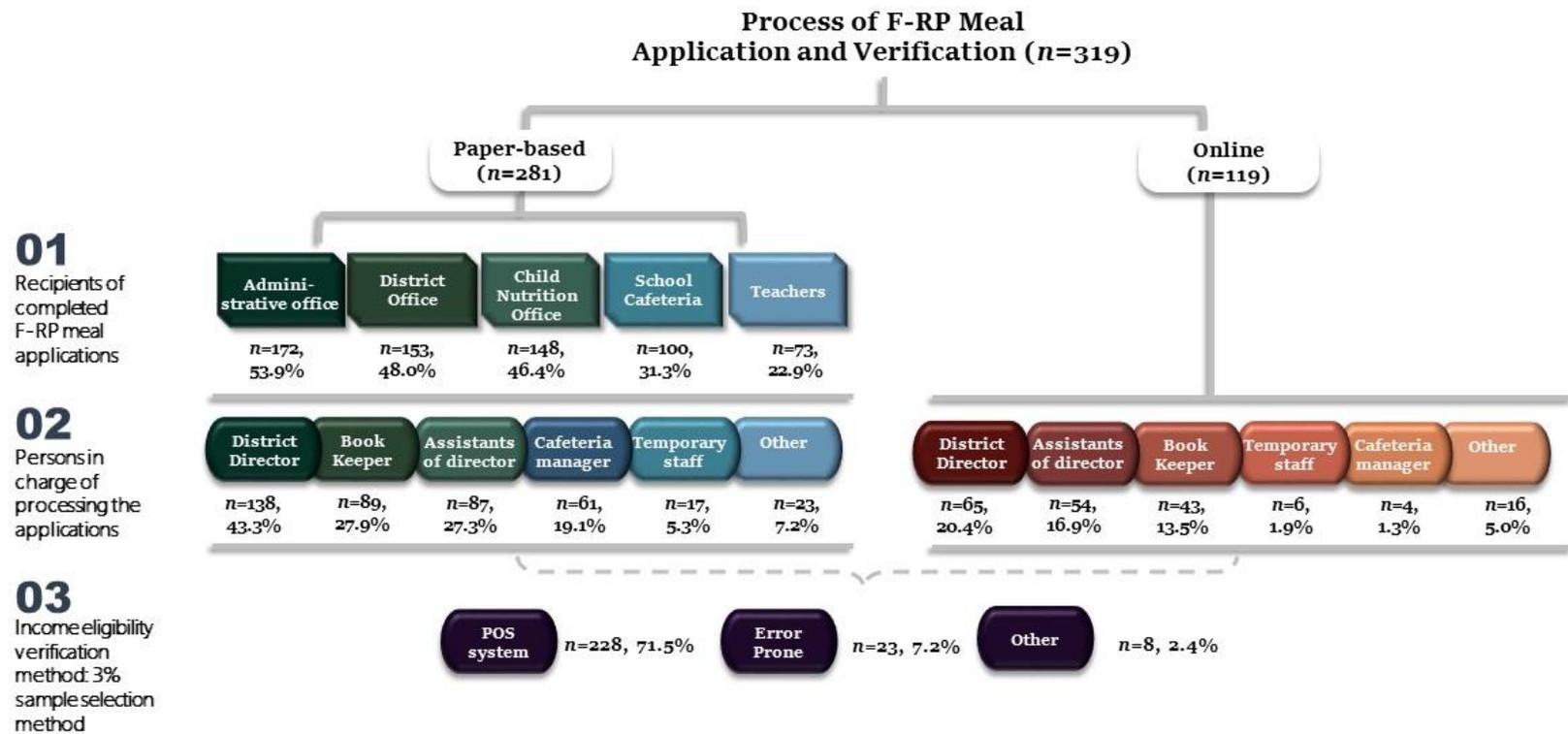
**Table 2.*****Types of Free and Reduced-Price Meal Applications Used in Small and Large Sized Districts***

	<b>Total</b>		<b>Small</b>		<b>Large</b>		$\chi^2$
	<i>(n=294)</i>		<i>(n=156)</i>		<i>(n=138)</i>		
	<i>n</i>	%	<i>n</i>	%	<i>N</i>	%	
Paper-based F-RP meal application only	175	54.9	129	40.4	46	14.4	254.53***
Both paper-based and online F-RP meal applications	106	33.2	24	7.5	82	25.7	
Online F-RP meal application only	13	4.1	3	0.9	10	3.1	

\*\*\*  $p < .001$ 

As shown in Figure 1 which describes the F-RP meal application and verification processes, more steps were involved in paper-based F-RP meal applications. In addition, more management staff in each school level were involved in processing paper-based F-RP meal applications (43.4% district directors, 19.1% cafeteria managers), compared to schools which received only online applications (20.4, 1.3%, respectively). Completed paper-based applications were accepted either at any time ( $n = 246$ , 77.1%) or during the enrollment period only ( $n = 27$ , 8.5%). Of the 119 respondents who used online F-RP meal applications, the majority (117 of 119, 98.3%) of the schools indicated that online F-RP meal applications were accepted and processed at any time.

Large school districts (student enrollment  $\geq 2,500$ ) were more likely to offer an online F-RP meal application platform ( $n = 92$ , 28.8%) compared to small school districts ( $n = 27$ , 8.4%). Although the great majority of small districts ( $n = 129$ , 40.4%) accepted only paper-based F-RP meal applications, only 14.4% ( $n = 46$ ) of the large school districts did. The majority of the large school districts ( $n = 82$ , 25.7%) allowed parents to submit either paper-based or online F-RP meal applications. Chi-square analysis showed a significant difference in the ways F-RP meal applications were received between small and large school districts ( $\chi^2 = 254.53$ ,  $p < .001$ ) (Table 2).



a. All percentages were calculated based on the total respondents (n = 319).

b. Multiple responses were received, and therefore the total number of responses exceeds 319.

**Figure 1. Process of F-RP Application and Verification**

With 89% of the total U.S. population using internet and 72% owning smartphones (Poushter, 2016), it is plausible that an online platform for F-RP meal application provides many parents with convenience when submitting the F-RP meal applications. Furthermore, the online F-RP meal application systems may enable SNP staff to process personal information more accurately and efficiently without double-handling of information. Even though such a system requires additional financial and human resources to maintain, many larger SNPs may find utilizing these online systems cost effective and labor efficient considering the large volume of applications and verifications to be processed. The larger a district, the greater the availability of financial resources (USDA FNS, 2016f). This fact partially explains higher utilization rates of online F-RP meal application systems in large school districts as shown in our results.

Once the paper-based F-RP meal applications were received, district directors ( $n = 138$ , 43.3%), bookkeepers or secretaries ( $n = 89$ , 27.9%), or assistants to district SNP directors ( $n = 87$ , 27.3%) processed the paper-based applications (Table 3). In some cases, temporary staff members were hired to process F-RP meal applications during the enrollment period ( $n = 17$ , 5.3%). The directors who participated in the interviews or site visits (Phase I) voiced how labor intensive this process was at the beginning of each school year. The fact that almost three out of every four students receive F-RP lunches (USDA FNS, 2016a) contributes to the massive amount of paperwork that must be completed each year. Further, SNPs in large school districts were more likely to hire temporary staff to help with paper-based enrollment compared to small districts ( $\chi^2 = 21.32$ ,  $p < .001$ ).

**Table 3.**  
*Individuals Who Process Paper-Based and Online Free and Reduced-Price Meal Applications in Small and Large Sized Districts*

	Paper-based							Online						
	Total ( $n=281$ )		Small ( $n=152$ )		Large ( $n=129$ )			Total ( $n=119$ )		Small ( $n=26$ )		Large ( $n=93$ )		
	$n^a$	%	$n$	%	$n$	%	$\chi^2$	$n^a$	%	$n$	%	$n$	%	$\chi^2$
District director	138	43.3	66	20.7	72	22.6	4.29*	65	20.4	14	4.4	51	16.0	3.52
Assistants of district director	87	27.3	22	6.9	65	20.4	42.11***	54	16.9	9	2.8	45	14.1	1.56
Bookkeeper or secretary	89	27.9	37	11.6	52	16.3	8.22**	43	13.5	6	1.9	37	11.6	2.46
School cafeteria managers	61	19.1	42	13.2	19	6.0	6.84**	4	1.3	2	0.6	2	0.6	1.92
Temporary staff only hired during enrollment time	17	5.3	0	0.0	17	5.3	21.32***	6	1.9	0	0.0	6	1.9	1.77

<sup>a</sup>. The total number of responses exceeds 319 due to multiple responses.

\*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$

Similar to the process for paper-based applications, district directors ( $n = 65, 20.4\%$ ) and assistants to school directors ( $n = 54, 16.9\%$ ) were in charge of online meal applications. Unlike paper-based F-RP meal applications, which had significant differences between small and large school districts in staff who processed the completed form, no significant difference was found in types of employees who were in charge of processing online F-RP meal applications between small and large districts (Table 3).

### Acceptable Income Verification Documents

Participants identified types of documents they accepted for verification of income eligibility. As Table 4 indicates, the majority (87.8%) of participants reported that they accepted paystubs as an acceptable documentation for income verification, followed by award letters from other agencies such as SNAP (74.0%), support payment decrees from courts (61.1%), and income tax documents (60.8%). A greater number and variety of documents were accepted in large districts than the small districts. An independent sample  $t$ -test revealed that the total number of verification documents accepted was greater in large districts ( $3.4 \pm 1.0$ ) than small districts ( $2.9 \pm 1.3$ ) ( $t = 4.31, p < 0.001$ ). Among small districts, 6.3% of SNPs ( $n = 20$ ) reported accepting only one document for verification, and 15 of them accepted paystubs only. Two large districts reported accepting paystubs only for income verification.

**Table 4. Documents Received for Child's Income Eligibility Verification ( $N=319$ )**

	$n^a$	%
Pay stubs	280	87.8
Award letters from other agencies (SNAP) indicating eligibility to receive services	236	74.0
Support payment decrees from courts	195	61.1
Income tax	194	60.8
Other	42	13.2

<sup>a</sup>. The total number of responses exceeds 319 due to multiple responses.

Regarding verification, the majority ( $n = 210, 65.9\%$ ) of the participants perceived the current verification process as adequate for determining eligibility. However, 12 management staff from small SNPs (6.9% of small districts) and 26 from large SNPs (18.1% of large districts) perceived that the current verification system was inadequate. Specific reasons for the inadequate system were (a) parents might omit some of the income documentation ( $n = 22, 6.9\%$ ), (b) the parents' response rate is low ( $n = 6, 1.9\%$ ), (c) the verification process is too cumbersome ( $n = 5, 1.6\%$ ), and (d) the 3% random checking is insufficient ( $n = 5, 1.6\%$ ). The majority (10 of 12) of management staff from small SNPs indicated that the process was inadequate because parents might omit some of the income documentation, while 12 of 26 management staff from large SNPs raised the same concern. Directors may feel that parents omitting documentations is an issue for over-certification if SNPs accept paystubs or support payment decrees from courts only as acceptable documentation for income.

Further, 10 directors from small SNPs and 3 from large SNPs reported that they did not require any income verification documents. Some of the directors explained in their open responses that they use an "honor system". While researchers cannot confirm that these SNPs truly do not follow verification requirements set by the USDA, this finding is of concern if, in fact, this is a representative practice in 4.1% of districts.

Only 74% of respondents indicated that they used direct certification through SNAP. The USDA Food and Nutrition Service (FNS) (2016e) reported that 91% of school-age SNAP participants were directly certified. Because many Community Eligibility Provision (CEP) participants are low income families and schools participating in CEP were not included in this dataset, the percentage of schools utilizing direct certification through SNAP in this study may be lower than the national average. Further, the percentage of SNAP participants reported by USDA FNS indicated the proportion of students directly certified whereas our data showed percent of schools or districts accepting direct certification. Therefore, data from the current study cannot be compared with previously published data in this regard.

## **CONCLUSIONS AND APPLICATION**

This study explored activities and personnel involved in free and reduced-price (F-RP) meal application and verification procedures in the school nutrition programs (SNPs) across the U.S. Considering that certification errors are the most prevalent type of errors (80% of all errors), and that such errors result in excessive benefit pay outs (USDA FNS, 2015a), SNPs need to practice due diligence when receiving and processing paperwork. Results of this study revealed that the application and verification processes require a significant number of personnel and hours of time.

The majority of participants reported that the applications for F-RP meal eligibility were completed using paper-based or a combination of paper-based and online application systems. Many directors of SNPs where paper-based applications were received, were concerned about the time- and resource-intensive nature of processing and verifying applications. Large SNPs employed temporary workers and/or other individuals at schools, districts, and SNPs to help process the large volume of data at the beginning of the academic year. Although strict regulations are applied to limit the use and disclosure of information gained from application (USDA FNS, 2016f), it remains unknown what qualifications these temporary workers have or whether their work is verified by other school nutrition staff. This practice raises concerns regarding data confidentiality and an increased risk of meal application forms being lost or misplaced.

Due to a large number of applications to be processed, in addition to using support staff such as secretarial or accounting staff, about 10% of large districts hired temporary staff to process applications during enrollment periods. Our data showed that in SNPs where online applications were accepted, the sequential processes were much simplified as parents entered information directly without going through a variety of personnel who might receive the information from students or parents and pass it on to SNP staff. In addition, more SNPs using online F-RP meal application systems accepted the applications throughout the year, as opposed to the enrollment periods only, than those accepting paper-based applications.

While the majority of SNPs received paper-based F-RP meal applications, many large districts accepted both paper-based and online F-RP meal applications concurrently. Considering benefits of the online application system, SNPs where both online and paper-based applications are accepted have the potential to reduce time and human resources, reduce data entry errors, and increase convenience for parents to apply at any time, if they can encourage more parents to apply online.

Regarding verification, over 10% of respondents indicated that the income verification process was inadequate. Some questioned if parents intentionally omitted a part of income documentations to obtain a higher level of benefit. Large SNPs accepted a wider variety of documents for income verification than small districts, and more small districts accepted paystubs only as an acceptable form of income verification. This practice of accepting paystubs only for income verification is considered less reliable by SNP directors as additional paystubs may be easily omitted when applying for F-RP meals.

Other SNP management staff were concerned about the low response rate when parents were asked to provide verification information. Therefore, future studies might investigate reasons for non-respondents and identify strategies to encourage parents to submit the required documentation. Based on the findings of this research, the following recommendations are provided for SNPs as well as government and professional organizations such as USDA, state agencies, the Institute of Child Nutrition (ICN), and the School Nutrition Association (SNA).

### **Recommendations for SNP Management Staff**

First, if both online and paper-based application systems are already in place, SNP directors should encourage parents to apply online. Encouraging parents to apply online will reduce workload and improve accuracy during F-RP meal application. If parental access to online systems is limited due to a lack of parents' technology devices, schools may provide computers and/or tablets at school offices to encourage online applications.

Second, if districts have a capacity to invest funds for an online application system, SNP directors may consider purchasing online F-RP meal application systems. The online application reduces both the number of human errors and the workload at schools, especially at the beginning of the school year. In addition, the online system minimizes risks related to confidentiality and security of information. The greater number of people involved in collecting and processing the forms, the more likely there would be processing errors or confidential information being exposed to unnecessary parties.

Third, SNP directors may maximize the use of direct certification, as suggested by the USDA FNS. While many respondents to this research indicated that they utilized direct certification procedures, some reported that they did not. Even though the direct certification process has its limitation of requiring technology (Gleason, Tasse, Jackson, & Nemeth, 2003), utilizing direct certification will eliminate the need for parents to supply documents for income verification, reduce workload in school districts, and reduce possible over- or under-certification of F-RP meal participants.

Finally, SNP directors may require more inclusive reports for income verifications instead of documents such as paystubs or support payment decrees from courts that could be easily omitted or underreported. Examples of inclusive documents are direct certification through award letter for SNAP and tax reports from the previous year. By requiring inclusive documents, the number of documents received may be reduced, and therefore, effort to keep track of confidential information would be minimized.

### **Recommendations for Government Agencies and Professional Organizations**

Government and professional organizations such as the USDA, State Agencies, ICN, and the SNA should encourage the above mentioned recommendations for SNP directors. These agencies may also provide guidance for acceptable documentation for F-RP meal application and

verification requirements to assist SNP directors and staff members with streamlining the application and verification processes while reducing human errors.

The latest data show that more than 10% of the students who are eligible to receive free meals through SNAP direct certification did not utilize the direct certification for F-RP meal applications (USDA FNS, 2015b). While the option for direct certification is available, 26% of respondents in this study indicated that they did not utilize it. Therefore, SNP directors may need to be informed and encouraged to use this error-proof verification method.

Finally, to reduce certification errors, school districts may need to seek further assistance from government agencies or professional organizations for ongoing training for SNP directors and other management staff. The HHFKA of 2010 includes suggestions for improving the accuracy of the certification process (USDA FNS, 2016d), and the USDA FNS requires professional standards that include education, training, and certification to be established for SNP staff (May, Standing, Chu, Gasper, & Riley, 2014).

The School Nutrition Specialist (SNS) Credential Program, which reflects USDA professional standards, includes program management and accountability training for accurate meal application and verification, as well as teaching the district reporting structure (SNA, 2015). While SNP directors and management staff, especially those in small districts, may seek additional assistance from state agencies, these agencies may also proactively reach out to small districts and provide guidance for complying and adhering to USDA standards in order to minimize over-certification and inappropriate payments.

### **Limitations and Recommendations for Future Research**

By design, this research study excluded school districts who were participating in CEP. Therefore, results are not relevant or applicable for those programs participating in CEP.

While the sampled states represent 47% of the total U.S. population, the inconsistent response rates resulted in over- or under-representation of certain regions. The number of respondents from the Southwest region represented 29.1% of total respondents, while the population of this region is only 12.6% of total population of the U.S. In addition, the population in Southeast region is approximately 20.0% of the total population, but only 9.7% of the participants were from the Southeast region. Therefore, the results need to be interpreted with caution for these regions.

Further, charter schools and small districts are more likely to use a paper-based F-RP meal application system. While 53.9% of respondents in this research were from districts with <2,500 students, the national data show that 71.5% of all school districts have fewer than 2,000 students enrolled (U.S. Department of Education, 2013). Therefore, the results need to be interpreted with caution when identifying practices in small districts.

Finally, due to the voluntary nature of the survey, there may be non-respondent bias in the data. Future researchers may explore ways to apply the findings of this study for streamlining F-RP meal application procedures as well as improving accuracy of documents submitted for income verification processes.

## ACKNOWLEDGEMENT

This publication has been produced by Institute of Child Nutrition - Applied Research Division (ICN – ARD), located at The University of Southern Mississippi with headquarters 11 at The University of Mississippi. Funding for the Institute has been provided with federal funds from the U.S. Department of Agriculture, Food and Nutrition Service, to The University of Mississippi. The contents of this publication do not necessarily reflect the views or policies of The University of Mississippi or the U.S. Department of Agriculture, nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. government.

The information provided in this manuscript is the result of independent research produced by ICN and is not necessarily in accordance with U.S. Department of Agriculture Food and Nutrition Service (FNS) policy. FNS is the federal agency responsible for all federal domestic child nutrition programs including the National School Lunch Program, the Child and Adult Care Food Program, and the Summer Food Service Program. Individuals are encouraged to contact their local child nutrition program sponsor and/or their Child Nutrition State Agency should there appear to be a conflict with the information contained herein, and any state or federal policy that governs the associated Child Nutrition Program. For more information on the federal child nutrition programs please visit [www.fns.usda.gov/cnd](http://www.fns.usda.gov/cnd).

## REFERENCES

Food Research and Action Center. (2015). *National School Lunch Program: Trends and factors affecting student participation*. Retrieved from [http://frac.org/pdf/national\\_school\\_lunch\\_report\\_2015.pdf](http://frac.org/pdf/national_school_lunch_report_2015.pdf)

Gleason, P., Tasse, T., Jackson, K., & Nemeth, P. (2003). *Direct certification in the National School Lunch Program – Impacts on program access and integrity final report*. Economic Research Service Electronic Publications from the Food Assistance & Nutrition Research Program. Retrieved from <https://www.disabilitypolicyresearch.org/~media/publications/pdfs/directcert.pdf>

Improper Payments Information Acts. (2002). 31 USC 3321. Retrieved from <http://www.gpo.gov/fdsys/pkg/PLAW-107publ300/pdf/PLAW-107publ300.pdf>

May, L., Standing, K., Chu, A., Gasper, J., & Riley, J. (2014). *Special Nutrition Program Operations Study: State and school food authority policies and practices for school meals programs school year 2011-12*. United States Department of Agriculture, Food and Nutrition Service, March 2014. Retrieved from <http://www.fns.usda.gov/sites/default/files/SNOPSYear1.pdf>

Poushter, J. (2016, February 22). Smartphone ownership and internet usage continues to climb in emerging economies. *Pew Research Center Global Attitudes & Trends*. Retrieved from <http://www.pewglobal.org/2016/02/22/smartphone-ownership-and-internet-usage-continues-to-climb-in-emerging-economies/>

School Nutrition Association. (2015). *School nutrition specialist credentialing exam handbook and application*. Retrieved from <http://schoolnutrition.org>

U. S. Department of Agriculture. (2013). *Agency financial report*. Retrieved from <http://www.usda.gov/documents/usda-fy13-agency-financial-report.pdf>

U. S. Department of Agriculture, Food and Nutrition Service. (2013). *Program fact sheet of National School Lunch Program*. Retrieved from <https://www.fns.usda.gov/sites/default/files/NSLPFactSheet.pdf>

U. S. Department of Agriculture, Food and Nutrition Service. (2015a). *Program error in the National School Lunch Program and School Breakfast Program: Findings from the Second Access, Participation, Eligibility and Certification Study (APEC II) Volume 1: Findings*. Retrieved from <http://www.fns.usda.gov/sites/default/files/ops/APECII-Vol1.pdf>

U. S. Department of Agriculture, Food and Nutrition Service. (2015b). *Direct certification in the National School Lunch Program state implementation progress, school year 2013-2014. Report to Congress – summary*. Retrieved from <http://www.fns.usda.gov/sites/default/files/ops/NSLPDirectCertification2014-Summary.pdf>

U. S. Department of Agriculture, Food and Nutrition Service. (2016a). *National level annual summary tables: FY 1969-2015: National School Lunch - participation and meals served*. Retrieved from <http://www.fns.usda.gov/sites/default/files/pd/slsummar.pdf>

U. S. Department of Agriculture, Food and Nutrition Service. (2016b). *National level annual summary tables: FY 1969-2015: School Breakfast - participation and meals served*. Retrieved from <http://www.fns.usda.gov/sites/default/files/pd/sbsummar.pdf>

U. S. Department of Agriculture, Food and Nutrition Service. (2016c). *National level annual summary tables: FY 1969-2015 NSLP, SBP and SMP - Program costs - cash and commodities*. Retrieved from <http://www.fns.usda.gov/sites/default/files/pd/cncost.pdf>

U. S. Department of Agriculture, Food and Nutrition Service. (2016d). *Child nutrition program integrity: A proposed rule by the Food and Nutrition Service*. Retrieved from <https://www.federalregister.gov/articles/2016/03/29/2016-06801/child-nutrition-program-integrity>

U. S. Department of Agriculture, Food and Nutrition Service. (2016e). *Direct certification in the National School Lunch Program: State implementation progress, school year 2014–2015*. Retrieved from <https://www.fns.usda.gov/sites/default/files/ops/NSLPDirectCertification2015.pdf>

U. S. Department of Agriculture, Food and Nutrition Service. (2016f). *Eligibility manual for school meals: Determining and verifying eligibility school year 2016-2017*. Retrieved from <https://www.fns.usda.gov/sites/default/files/cn/EligibilityManualFinal.pdf>

U. S. Department of Education. (2013). *Characteristics of public school districts in the United States: Results from the 2011-2012 schools and staffing survey*. Retrieved from <http://nces.ed.gov/pubs2013/2013311.pdf>

U. S. Government Publishing Office. (2016). *Child nutrition programs: Income eligibility guidelines*. Retrieved from <https://www.gpo.gov/fdsys/pkg/FR-2016-03-23/pdf/2016-06463.pdf>

## **BIOGRAPHY**

Kwon and Park are in the Department of Hospitality Management at Kansas State University in Manhattan, Kansas, where Kwon is an Associate Professor and Park is a graduate research assistant. Lee and Wang are in the Department of Nutrition, Dietetics, and Hospitality Management at Auburn University in Alabama where Lee is an Assistant Professor and Wang is a graduate research assistant. Rushing is a Research Scientist with the Institute of Child Nutrition at The University of Southern Mississippi in Hattiesburg, Mississippi.