California State Auditor

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San Diego County's Health and Human Services Agency

It Cannot Demonstrate That It Employs the Appropriate Number of Public Health Nurses to Efficiently Serve Its Residents

Report 2017-124

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July 26, 2018 2017-124

The Governor of California
President pro Tempore of the Senate
Speaker of the Assembly
State Capitol
Sacramento, California 95814

Dear Governor and Legislative Leaders:

As requested by the Joint Legislative Audit Committee, the California State Auditor presents this audit report concerning San Diego County's Health and Human Services Agency (Health Agency) and whether it has adequate staffing levels of public health nurses (PHNs) to appropriately serve county residents. This report concludes that the Health Agency should measure and assess PHN efficiency so it can better demonstrate that it employs the appropriate number of PHNs to efficiently serve its residents, and that it should better ensure its PHNs are prepared for future public health emergencies.

The Health Agency is responsible for providing a variety of health and social services to county residents, including child welfare, public health, and behavioral health services. San Diego County's Code of Administrative Ordinances requires the Health Agency's director to administer programs through its departments, divisions, and geographic service regions in a manner that integrates the administration and delivery of services to ensure effectiveness, efficiency, accessibility, and quality. We found that the Health Agency does not consistently use available information such as case assignment or caseload data to measure PHN efficiency and help assess its PHN staffing assignments. For instance, the Health Agency does not require its managers to monitor each PHN's caseload. Our review of caseload information for the Health Care Program for Children in Foster Care and the California Children's Services program revealed that the average caseload per PHN exceeded state benchmarks for both programs for the three fiscal years we reviewed.

In addition, San Diego County experienced an outbreak of hepatitis A in 2017, which the Health Agency detected in March 2017 and for which the county declared a local public health emergency in September 2017. The Health Agency used both its own PHNs and temporary staff, including staff from hospitals and fire departments, to respond to the hepatitis A outbreak. Although the Health Agency appears to have followed its plan for responding to public health threats to address the outbreak, the plan was still in draft form until June 2018. Distributing the plan to its PHNs and training them on its protocols would better ensure that the Health Agency's PHNs understand their responsibilities during future public health emergencies.

Respectfully submitted,

Elaine M. Howle

ELAINE M. HOWLE, CPA
State Auditor

Selected Abbreviations Used in This Report

Children's Services	California Children's Services program
Foster Care	Health Care Program for Children in Foster Care
Health Agency	San Diego County's Health and Human Services Agency
PHN	public health nurse
surge plan	Public Health Personnel and Infrastructure Surge Capacity Plan

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SUMMARY

San Diego County is the second most populous county in the State, with an estimated population of 3.3 million residents as of January 2018. San Diego County's Health and Human Services Agency (Health Agency) is responsible for providing a variety of health and social services to county residents, including public health, child welfare, and behavioral health services. San Diego County's Code of Administrative Ordinances requires the Health Agency to administer programs through its departments, divisions, and geographic service regions in a manner that integrates the administration and delivery of services to assure effectiveness, efficiency, accessibility, and quality. For this audit, we reviewed whether the Health Agency had adequate levels of public health nurses (PHNs) to appropriately serve county residents.

The Health Agency Cannot Sufficiently Demonstrate That It Has the Appropriate Number of PHNs

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The Health Agency does not consistently use available information, such as case assignment data, to measure PHN efficiency and help assess its PHN staffing assignments. For instance, the Health Agency does not require its managers to monitor each PHN's caseload. Our review of caseload information for the Health Care Program for Children in Foster Care (Foster Care) and the California Children's Services program (Children's Services) revealed that the average caseload per PHN exceeded state benchmarks for both programs for the three fiscal years we reviewed. For instance, in 2017, the average caseload per PHN in the Foster Care program was 255, which exceeds the state benchmark of 200. We also observed notable differences in Foster Care PHN caseloads among the Health Agency's six regions. In 2017 the Foster Care PHN covering cases in the East region averaged 295 cases, almost 100 cases more than the 197 average Foster Care caseload in the South region. The Health Agency also does not require managers to use a case complexity measure to assess or distribute caseloads in Foster Care or Children's Services. A case complexity measure would allow managers to assess levels of client need and anticipate the amount of work that cases of differing complexity might involve when making PHN caseload assignments. For instance, such a measure could help Foster Care assess whether variations in regional PHN caseloads are reasonable on the basis of varying amounts of work particular Foster Care cases require.

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The Health Agency Implemented Its Draft Surge Plan to Respond to the Recent Hepatitis A Outbreak

San Diego County experienced an outbreak of hepatitis A in 2017, which the Health Agency detected in March 2017 and for which it declared a local public health emergency in September 2017. According to its after action report, San Diego County implemented its draft Public Health Personnel and Infrastructure Surge Capacity Plan (surge plan) to respond to the outbreak. Specifically, the report stated that the Health Agency used the surge plan's protocols to use both its own PHNs and to engage and train 158 temporary nursing staff to augment its vaccination efforts. Billing summaries show that these temporary nurses worked nearly 6,800 hours during the outbreak response. Although the Health Agency appears to have followed its surge plan during the hepatitis A outbreak, the plan was still in draft form until June 2018. Neither the after action report nor the 2017/2018 San Diego County Grand Jury (grand jury) report, which assessed the county's performance in responding to the hepatitis A outbreak, identified concerns related to the Health Agency's use of its PHNs in response to the outbreak.

Other Areas We Reviewed

To hire new PHN staff, the Health Agency uses San Diego County's civil service practices and procedures, filling its vacancies from a list established through the county's certification process. The county has had a full list of qualified candidates for the PHN classification. For example, from March 2017 through November 2017, the Health Agency received 142 applications for PHN positions, of which 107 applicants qualified and were placed on the list and from which the Health Agency hired 13 PHNs. We also reviewed the Health Agency's financial resources and did not find impediments that would prevent it from filling its currently authorized PHN positions. State and federal government agencies provide the primary funding for the programs that staff PHNs; the county matches these funds with realignment money from the State.

Key Recommendation

To better ensure and demonstrate that it efficiently meets the public health needs of at-risk county residents and that it employs the appropriate number of PHNs in the right locations to address those needs, the Health Agency should measure and assess PHN efficiency.

Agency Comments

The Health Agency disagreed with our recommendation that it develop and implement PHN efficiency measures. Beginning on page 35, we provide our perspective on the Health Agency's response to our report.

INTRODUCTION

Background

Public health nursing is a practice within the nursing profession that focuses on promoting and protecting the health of a population by working to prevent disease and support at-risk populations. At-risk populations (clients) can include foster youth; children with specific physical limitations, chronic health conditions, or diseases; first-time low-income mothers; and persons who have tested positive for conditions such as tuberculosis. Public health nurses (PHNs) also respond to public health emergencies and other immediate public health needs as they arise, which can involve such actions as providing vaccinations during disease outbreaks.

San Diego County's Health and Human Services Agency

The Department of Finance estimates that as of January 2018, San Diego County had 3.3 million residents, making it the second most populous of California's 58 counties, behind only Los Angeles County. According to its website and operational plan, San Diego County's Health and Human Services Agency (Health Agency) is responsible for providing a variety of health and social services to county residents, including child welfare, public health, and behavioral health services. The Health Agency is governed by the county chief administrative officer and board of supervisors, and is headed by a director who oversees its 6,000-plus staff, including 192 PHN positions. This equals roughly one PHN position per 17,000 residents.

The Health Agency comprises six programmatic departments, one of which is Public Health Services. According to its website, Public Health Services works to prevent epidemics, the spread of disease, and injuries; protect against environmental hazards; promote and encourage healthy behaviors; and respond to disasters to help communities and assure health services throughout the county. The Health Agency assigns 71 of its PHN positions (37 percent of its total 192) to Public Health Services. The text box describes the branches

Public Health Services Branches

Maternal, Child, and Family Health Services Branch—works to promote health and protect and support pregnant women, children, families, and communities. The branch administers the Health Care Program for Children in Foster Care (Foster Care), among others.

California Children's Services Branch (Children's Services)—provides funding for treatment of children with certain physical limitations and chronic health conditions or diseases, and authorizes and pays for specific medical services and equipment provided by Children's Services-approved specialists. Children's Services is a countywide program funded by state, county, and federal funds, as well as fees paid by parents.

Epidemiology and Immunization Services Branch—works to identify, investigate, register, and evaluate communicable, reportable, and emerging diseases and conditions to protect the health of the community.

Tuberculosis Control and Refugee Health Branch—works to detect, control, and prevent the spread of tuberculosis through treatment, case management, and contact investigation, and provides refugee health program services.

HIV, STD, and Hepatitis Branch—helps assure the development and delivery of prevention and treatment services for the human immunodeficiency virus (HIV) and sexually transmitted diseases (STDs), particularly in communities disproportionately affected by HIV and STDs.

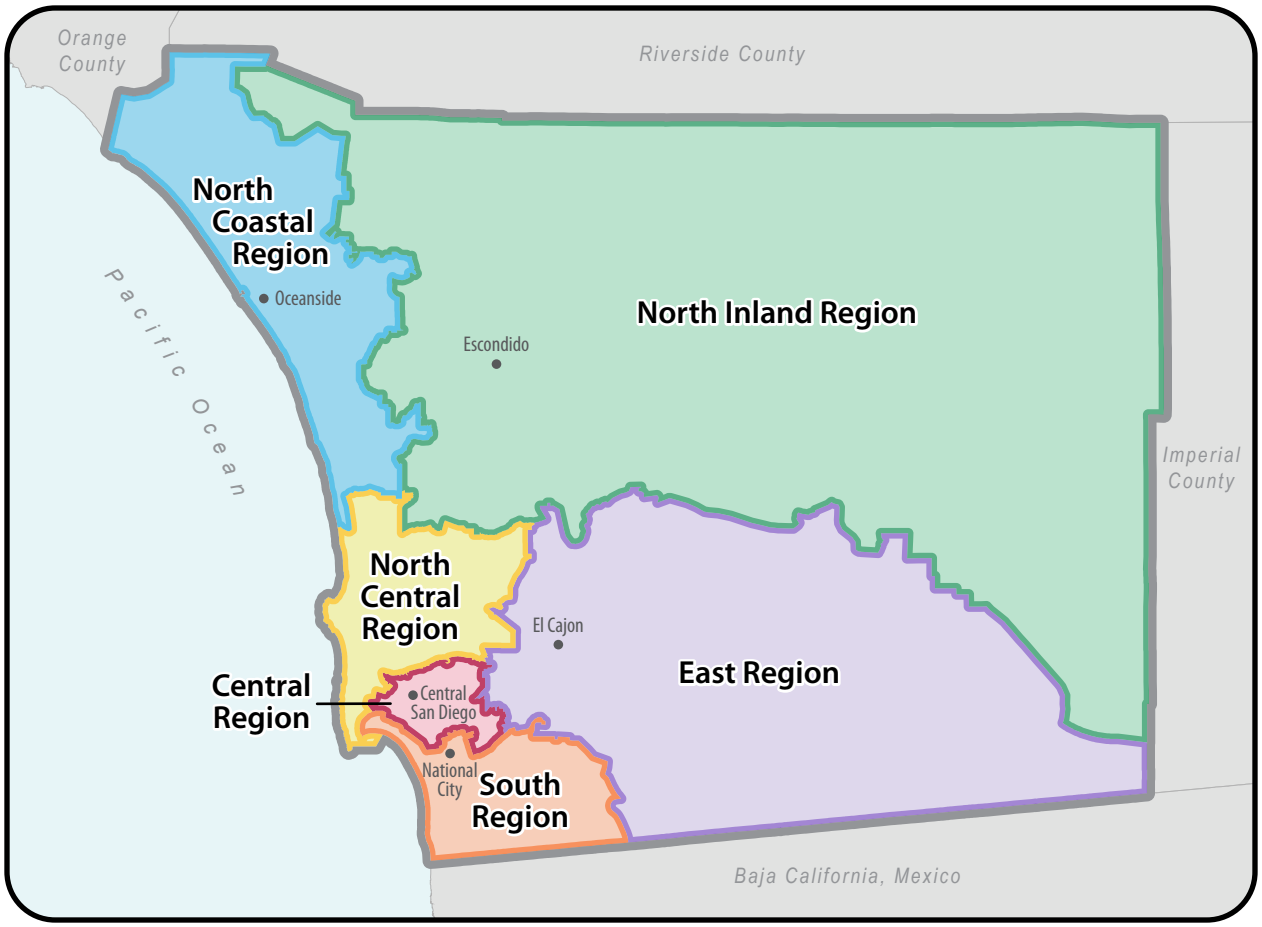
Public Health Preparedness and Response Branch—coordinates with emergency management agencies, community organizations, medical providers, prehospital provider agencies (fire/emergency medical services), hospitals, clinics, skilled nursing facilities, businesses, and other partners to develop public health and disaster preparedness through dissemination of risk assessments, trainings, and public health guidance.

Public Health Services Administration Branch—provides program direction and administrative support to all Public Health Services program areas. The branch is also responsible for coordinating a unified response from the Public Health Services division when information is requested agencywide.

Source: Health Agency's fact sheets and website.

within Public Health Services. Public Health Services also assigns 105 PHN positions (55 percent) to facilities within its six regions. Figure 1 depicts these regions.

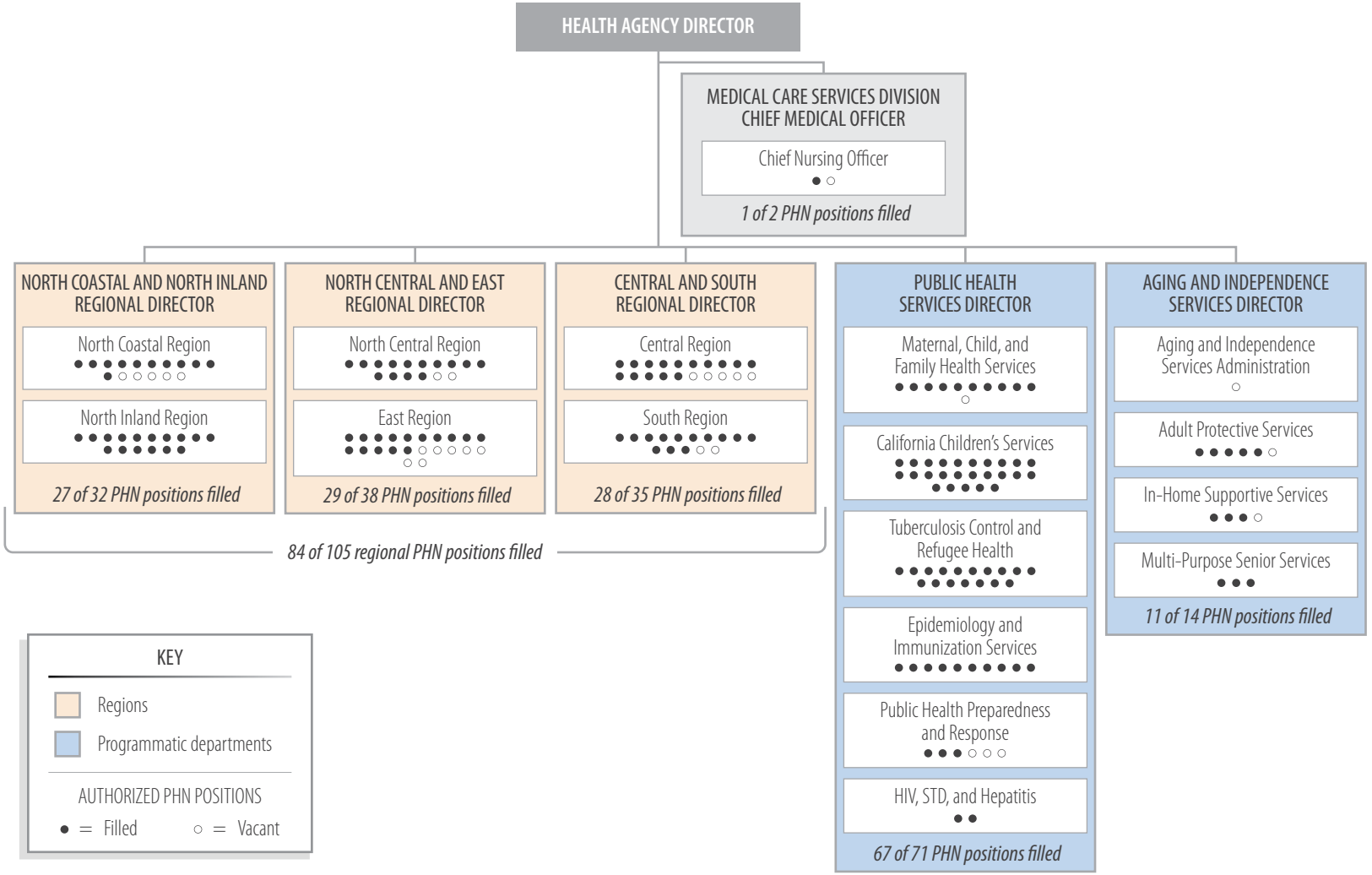
Figure 1
San Diego County Has Six Public Health Regions



Source: Health Agency's website.

Each of the Health Agency's six regions has at least one public health center, which usually hosts a health clinic and a variety of public health services, including those staffed by PHNs. The Health Agency assigns its remaining 16 PHN positions (8 percent) to Aging and Independence Services and the Medical Care Services Division. Figure 2 illustrates the Health Agency's relevant organizational structure.

Figure 2
The Health Agency Assigns Its PHNs Across Multiple Regions and Programmatic Departments



Source: Analysis of the Health Agency's organizational charts and human resources data.

Notes: Other than the six regions, this organizational chart includes only those Health Agency programmatic departments that contain PHNs. The Health Agency's other programmatic departments are Self-Sufficiency Services, Behavioral Health Services, Child Welfare Services, and Housing and Community Development Services.

As of December 31, 2017, the Health Agency had 192 authorized PHN positions, 163 of which it had filled. Twenty (69 percent) of its 29 vacancies were in the North Coastal, East, and Central regions and the Public Health Preparedness and Response Branch. Data from the Health Agency indicate that as of June 12, 2018, the Health Agency had filled five of those 20 PHN vacancies and was in the process of filling seven others. The data also indicate that the Health Agency reclassified or was in the process of reclassifying five PHN positions and was waiting to fill one position until it filled a corresponding supervisory position. The remaining two PHN positions were vacated in May and June 2018.

Funding for the Health Agency's PHN-Staffed Programs

According to Health Agency data, many of its programs that employ PHNs receive a blend of federal, state, and county funding. Realignment revenues, which are funds collected by the State and distributed to counties for specific purposes based on a formula, account for a large portion of the Health Agency's spending on programs that employ PHNs.

The county's adopted operational plan for fiscal years 2017–18 and 2018–19 reports that in fiscal year 2017–18, the Health Agency's total budget was $1.9 billion. Of this, nearly $144 million was for Public Health Services. Table 1 breaks out the Health Agency's funding over the past three fiscal years for programs that employ PHNs.

San Diego County's Recent Hepatitis A Outbreak

During 2017 San Diego County experienced an outbreak of hepatitis A, which, according to the Health Agency's website, resulted in at least 590 cases, 405 hospitalizations, and 20 deaths as of July 12, 2018. Hepatitis A is a highly contagious liver infection that is spread person to person and via fecally contaminated material. In San Diego County the outbreak primarily affected people who were homeless or using illicit drugs.

According to the county's May 2018 after action report, the county detected the hepatitis A virus outbreak in early March 2017, with cases traced back to late November 2016. The after action report also indicated that in March 2017 the Health Agency began redirecting its PHNs from their regular duties to administer vaccinations. On September 1, 2017, the Health Agency declared a local health emergency. In October 2017 the Governor declared a state of emergency for all of California and ordered that all measures necessary should be taken to obtain hepatitis A vaccines.

As we discuss on pages 21 and 23, we found that 92 PHNs worked overtime as part of the hepatitis A response, and that the county hired temporary nursing staff as well as contracted with hospitals and fire departments to counteract the outbreak. Although its board of supervisors lifted San Diego County's emergency on January 23, 2018, the State's emergency remained in place as of May 2018. Figure 3 on the following page illustrates the timeline of the hepatitis A outbreak.

Table 1
The Health Agency Derives the Majority of Its Funding for Programs With PHNs From Federal and Realignment Sources
(Dollars in Millions)

	FISCAL YEAR		
	2014–15	2015–16	2016–17
PHN positions [budgeted, full-time equivalents (FTEs)]*	**179**	**180**	**177**
Federal funds	$27.6	$30.5	$32.9
Realignment funds†	28.4	29.4	28.5
State funds	11.8	12.3	13.0
County funds‡	11.4	10.9	12.1
Miscellaneous funds§	1.8	1.4	1.4
Total funds for programs with PHNs‖	**$81.0**	**$84.4**	**$87.8**

Source: Unaudited financial information provided by the Health Agency's Financial and Support Services Division's assistant finance director.

* PHN positions is the number of budgeted FTE PHNs that the Health Agency was authorized over the course of the year. It does not reflect point-in-time counts, as we depict in other graphics.

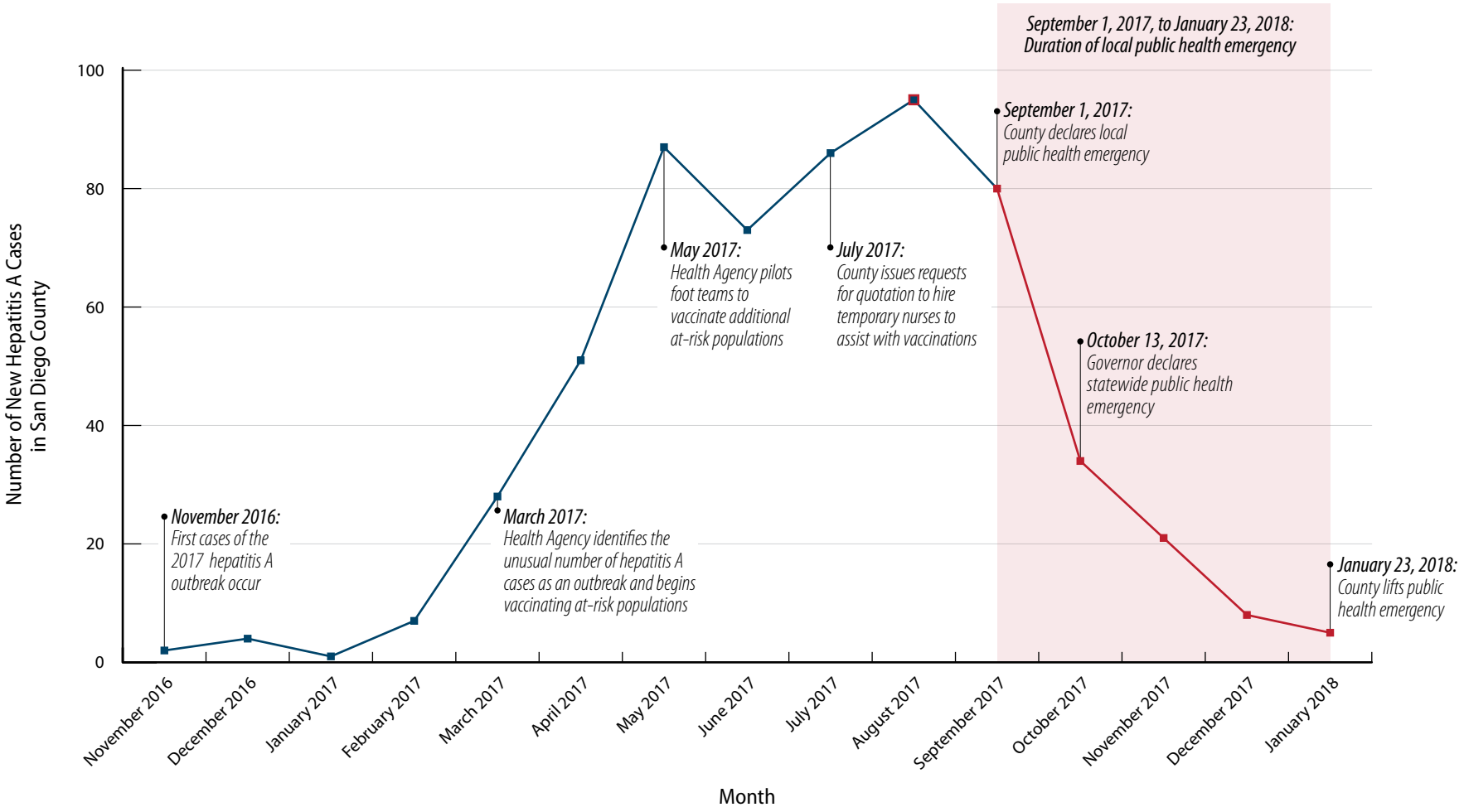
† Realignment funds refers to state funds distributed to county governments for public health and social services.

‡ County funds refers to general-purpose revenue and use of fund balance.

§ Miscellaneous funds refers to funds from First 5 for programs such as Lactation and Childhood Obesity, from Medi-Cal payments for tuberculosis services, and from fees charged for services including STD and immunization fees.

‖ The Health Agency did not provide budgetary information for the 16 PHNs under the Aging and Independence Services programmatic department. According to the Health Agency's Financial and Support Services Division's assistant finance director, the majority of Aging and Independence Services' budget is for In-Home Support Services, and including those funds would distort the overall picture for public health funding. Totals may not equal the sum of funds above due to rounding.

Figure 3
New Cases During San Diego County's Hepatitis A Outbreak Peaked in August 2017



Source: Analysis of San Diego County's after action report and the 2017/2018 San Diego County Grand Jury report on the hepatitis A outbreak, both issued in May 2018.

The Health Agency Cannot Sufficiently Demonstrate That It Has the Appropriate Number of PHNs

Key Points

- The Health Agency does not consistently use available information such as case assignment data to measure PHN efficiency and assess its PHN staffing assignments. Consequently, the Health Agency cannot sufficiently demonstrate that it employs the appropriate number of PHNs or allocates them to the right locations.
- Some factors, including a lack of required standards for measuring PHN workloads, may impede the Health Agency's ability to monitor its PHNs' efficiency and the appropriateness of its PHN staffing. However, the Health Agency has a resource, in the form of its chief nursing officer, that it can use to develop efficiency measures using factors such as PHN caseload and case complexity to help the Health Agency ensure and demonstrate the efficiency of its PHN staffing.

Because the Health Agency Does Not Use Efficiency Measures, It Cannot Fully Demonstrate That Its PHN Staffing Is Appropriate

The Health Agency does not use relevant information available to it to better assess whether it has an adequate number of PHNs overall and has assigned the right number of them to its regions and programs. San Diego County's Code of Administrative Ordinances requires the Health Agency's director to administer programs through departments, divisions, and geographic service regions in a manner that integrates the administration and delivery of services to ensure their effectiveness, efficiency, accessibility, and quality. Similarly, a guiding principle of the Health Agency's Public Health Services' strategic plan for 2013 to 2018 is to provide optimal, community-focused services by aligning its efforts and resources to achieve effectiveness and efficiency. Given these mandates, we would expect the Health Agency to monitor both effectiveness and efficiency to help ensure that it employs the appropriate number of PHNs overall and allocates them to each of its public health programs and service regions to best meet public health needs.

Contrary to the expectations created by the county ordinance and Public Health Services' strategic plan, the Health Agency evaluates the *effectiveness* but not the *efficiency* of its PHNs' performance. Specifically, it uses metrics such as the percentage of clients who receive timely preventive health exams to assess how well its public health programs provide services. However, it does not consistently use available information such as case assignment data to measure PHN efficiency and help assess its PHN staffing assignments. Consequently, the Health Agency cannot sufficiently demonstrate whether it employs the appropriate number of PHNs or allocates them to the right locations.

We surveyed the Health Agency's PHNs to obtain their perspective on issues affecting PHN staffing and, based on the responses, reviewed selected effectiveness measures for two programs for which a large percentage of PHNs reported that their caseloads were too high for them to do their jobs effectively. As Table 2 shows, five of the 10 (50 percent) PHNs in Foster Care who responded to our survey said their caseloads were too high for them to effectively accomplish their jobs. Similarly, 17 of the 21 (81 percent) PHNs in Children's Services who responded to our survey said their caseloads were too high. These Foster Care and Children's Services PHN respondents account for 22 of the 40 total Health Agency PHN respondents who told us their caseloads were too high for them to effectively accomplish their jobs. According to the Health Agency's chief nursing officer, who is responsible for planning, organizing, evaluating, and directing its PHN programs, our survey results correspond with caseload concerns she has heard from Foster Care and Children's Services PHNs.

Table 2
PHNs Raised Workload Concerns in Response to Our Survey Questions

PROGRAM	NUMBER OF PHNs SURVEYED*	NUMBER OF RESPONSES	RESPONSE RATE	RESPONSE: CASELOAD IS TOO HIGH FOR YOU TO EFFECTIVELY ACCOMPLISH YOUR JOB	
				NUMBER	PERCENTAGE
Foster Care	16	10	63%	5	50%
Children's Services	23	21	91	17	81
Other programs	132	80	61	18	23
Total surveyed	**171**	**111**	**65%**	**40**	**36%**

Source: Analysis of survey responses from Health Agency PHNs.

* Total number of Health Agency PHNs surveyed as of January 3, 2018.

The Health Agency assigns about a quarter of its total PHN staff to Foster Care and Children's Services to provide for the public health needs of clients in those programs. State law requires the county to use Foster Care PHNs to coordinate health care services with child welfare services workers for dependents in foster care. The Health Agency budgeted 19 PHN positions (almost 10 percent of its total PHN positions) to Foster Care. State law also establishes Children's Services, a state and county program that provides medically necessary benefits to persons under 21 years of age who have physically handicapping conditions and meet medical, financial, and residential eligibility requirements. The Health Agency assigned 25 PHN positions (13 percent of its total PHN positions) to Children's Services.

Notwithstanding the concerns that Foster Care PHNs raised regarding their caseloads, the Health Agency reported generally positive results on the program's effectiveness measures during our audit period. Specifically, California's Department of Health Care Services (Health Care Services) requires the Health Agency to report on three Foster Care effectiveness measures: timely preventive health exams, timely preventive dental exams, and timely coordination of follow-up care when health assessments reveal conditions requiring it. For the preventive exam measures, the Health Agency's goal is that 100 percent of foster care children will receive timely physical and dental exams.[1] Although the Health Agency did not meet this goal, it reported that more than 90 percent of Foster Care clients received timely health exams in fiscal years 2014–15 through 2016–17. The Health Agency reported its highest score, 97 percent, on this measure in fiscal year 2016–17. On the dental exam measure, the Health Agency reported scoring 91 percent in fiscal year 2016–17. However, it reported scoring only 75 percent and 77 percent on this measure in fiscal years 2014–15 and 2015–16, respectively. Although two PHNs told us that clients might miss or be overdue for certain exams if PHNs are understaffed and do not mail out reminders for preventive services, the Health Agency identified other problems unrelated to PHN staffing, including problems with clients' Medi-Cal enrollment, as among the most common impediments to timely preventive services that Foster Care clients' caregivers reported.

The Health Agency reported generally lower scores on a third effectiveness measure for Foster Care—timely follow-up care. This measure considers the percentage of clients for whom PHNs coordinate timely follow-up care when their health conditions require it (timely follow-up is considered to be within 120 days of when the program receives appropriate paperwork from a client's provider). The Health Agency's reported scores on this measure fluctuated from 51 percent in fiscal year 2014–15 to 89 percent in fiscal year 2015–16 to 78 percent in fiscal year 2016–17. The branch chief who oversees Foster Care indicated that performance on this measure was low in part because PHNs had difficulty determining from the paperwork submitted by providers that a child had received appropriate follow-up care.

Similarly, despite the concerns Children's Services PHNs raised regarding their caseloads, during our audit period the Health Agency reported generally positive scores on eight performance measures that Health Care Services requires Children's Services to track. These include whether program staff determine clients' medical, financial,

[1] State regulations require foster children to receive health assessments and dental exams according to schedules established by the Child Health and Disability Prevention Program. For example, between the ages of 3 and 18 years, foster children should receive a health assessment annually and a dental exam every six months. Additionally, foster children residing in out-of-home placements should receive a medical and dental exam within 30 days of initial placement.

and residential eligibility in a timely manner, and the extent to which clients' families participate in the program. The measures also assess the proportions of clients who have primary care providers; who have certain medical conditions and received referrals and authorizations for special care; and who are 14 years or older, are expected to have chronic health conditions that extend past their 21st birthday, and have documentation of a biannual review for long-term transition planning to adulthood. The Health Agency's reported scores on the eight Children's Services performance measures for the three fiscal years of our audit period were 91 percent or better in 17 of the 24 instances (71 percent) we reviewed. The lowest score among the Children's Services measures was 78 percent in both fiscal years 2015–16 and 2016–17 on the measure regarding long-term transition planning. In fiscal year 2015–16, Children's Services implemented a quality improvement project to enhance the transition to adult health care. The project called for expanding PHN interactions with certain clients to include phone calls and face-to-face encounters. Although this project may have increased the amount of time PHNs spent on some of their cases, the Health Agency's fiscal year 2016–17 reported score of 78 percent for transition planning did not change from the prior year.

The Health Agency also points to its 2016 accreditation by the Public Health Accreditation Board (Accreditation Board) as evidence of its commitment to excellence across a wide range of public health services. The goal of this voluntary national accreditation program is to improve and protect public health by advancing the quality and performance of public health departments. The Accreditation Board's standards and measures for accreditation address 10 essential public health services, as well as the Health Agency's management, administration, and governance. San Diego County's Health Agency received accreditation in May 2016.

The goal of the Accreditation Board, a voluntary national accreditation program, is to improve and protect public health.

Within the State, only the California Department of Public Health and 10 of California's 61 local health departments have received such accreditation. Although the Health Agency reported that the Accreditation Board awarded San Diego County the highest possible ranking on 94 of 100 assessment measures, it also acknowledged that the Accreditation Board identified challenges or opportunities for improvement, including the Health Agency's assessments of staff competencies and performance management.

Although the Health Agency may be successfully providing services to clients, it does not consistently measure PHN efficiency. For example, the Health Agency does not require its managers to monitor each PHN's caseload. We used a combination of information, including PHN case assignment records and PHN vacancies, to calculate average caseloads for Foster Care and Children's Services PHNs. In the absence of generally accepted caseload measures, we used benchmark indicators from state funding documents as a proxy to assess caseload variations over time and among regions.[2] For Foster Care, documents from both the California Department of Social Services (Social Services) and Health Care Services state a ratio of 1 PHN to 200 clients. For Children's Services, guidelines issued by Health Care Services state a ratio of 1 nurse to 400 clients.[3]

As Figure 4 on the following page shows, average caseloads for the Health Agency's PHNs exceeded these state benchmarks for both programs for all three years we reviewed. Although total caseloads have declined for both programs since 2015, the discrepancy between the benchmarks and the Health Agency's average caseloads is an indicator that the Health Agency's overall Foster Care and Children's Services PHN staffing may be inadequate.

We also observed notable differences in Foster Care PHN caseloads among the Health Agency's six regions. As Figure 5 on page 15 shows, in 2017 the Foster Care PHN covering cases in the East region averaged 295 cases. This was higher than the State's benchmark of 200 cases per Foster Care PHN. The East region PHN also carried almost 100 cases more than the 197 average caseload in the South region, which was just under the State's goal. These differences indicate that the Health Agency may not be optimally allocating PHNs to provide Foster Care services throughout the county.

Unlike Foster Care PHNs, each Children's Services PHN who coordinates services for clients carries a roughly equal caseload. According to the program's medical director, program managers assign cases by generating a complete list of clients, alphabetizing the list by client surname, and dividing the list evenly among PHNs. Public Health Services cited in its fiscal year 2015–16 annual report the nearly 13,500 chronically ill, severely and physically disabled persons it served as a Children's Services accomplishment. However, as we showed in Table 2 on page 10, 81 percent of Children's Services PHNs who responded to our survey said their caseloads were too high to allow them to effectively accomplish their jobs.

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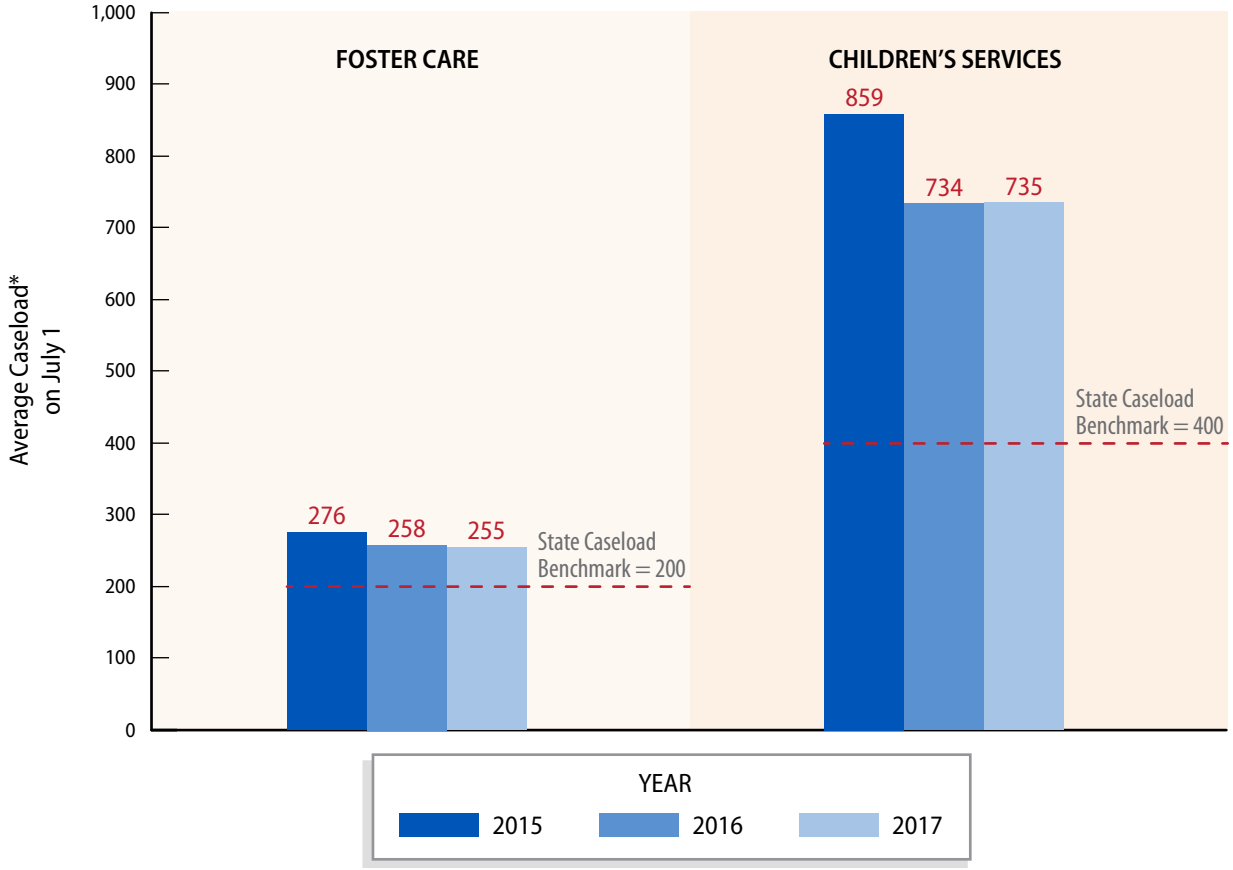
2 We relied on Social Services' 1999 *All County Letter Number 99-108* and Health Care Services' 2017 *Child Health and Disability Prevention Program Letter Number 01-2017* for Foster Care caseload benchmarks and on Health Care Services' current *Children's Medical Services Plan and Fiscal Guidelines*, which have been in effect since fiscal year 2013–14, for Children's Services caseload benchmarks.

3 Health Care Services' *Children's Medical Services Plan and Fiscal Guidelines* (plan) mentions a staffing ratio of 1 nurse to 400 cases. This staffing ratio applies to PHNs and other types of nurses. Because the Health Agency's 25 Children's Services nurses are all PHNs, we refer to the plan's staffing ratio as a PHN ratio for audit purposes.

Caseloads for Children's Services PHNs were highest in 2015, as shown in Figure 4. In that year, each PHN carried an average of 859 cases, more than twice the 400 cases cited in Health Care Services' ratio. In 2016 and 2017, each PHN carried more than 100 fewer cases than in 2015 (734 and 735, respectively) but still well above 400. Because program managers do not use efficiency measures to track factors such as the amount of time, including any overtime, that PHNs spend on their caseload duties, the Health Agency cannot sufficiently demonstrate that it employs an appropriate number of PHNs to coordinate care for Children's Services clients. The human services program manager for Children's Services told us that the statewide Children's Services program is currently defining changes in standards for caseload and performance management data, and that it could develop and implement a model to define PHN efficiency as part of changes already in progress.

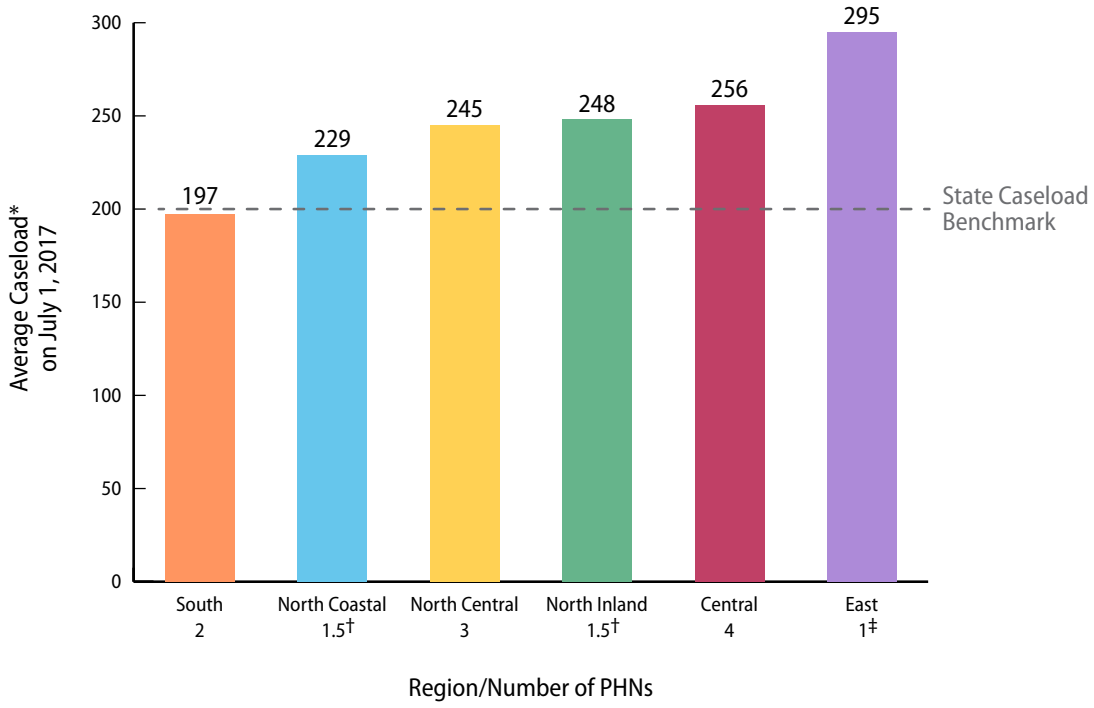
Figure 4
Average Caseloads for Foster Care and Children's Services Exceeded State Benchmarks



Source: Analysis of the Health Agency's Foster Care and Children's Services PHN case assignments data, Social Services' *All County Letter No. 99-108*, and Health Care Services' *Child and Health Disability Prevention Program Letter No. 01-2017* and *Children's Medical Services Plan and Fiscal Guidelines*.

* Average caseloads are calculated using filled PHN positions, not budgeted positions.

Figure 5
The Health Agency's Foster Care PHN Caseloads Varied Among Regions



Source: Analysis of Health Agency personnel and caseload data and correspondence with Foster Care PHNs.

* Average caseloads are calculated using filled PHN positions, not budgeted positions.

† North Coastal and North Inland regions each have one PHN position and share another PHN position.

‡ There is only one East region Foster Care PHN.

Although no state laws govern the ratio of clients to PHN for public health facilities, the State's benchmark of 200 cases per Foster Care PHN and 400 cases per Children's Services PHN could help the Health Agency evaluate whether its PHN staffing in those programs is adequate. However, managers of both Foster Care and Children's Services expressed concern that caseload numbers provide incomplete information about PHN efficiency. The branch chief over Foster Care said that caseload is a simplistic measure of PHN workload because of variables including case complexity. Similarly, the medical director of Children's Services indicated that caseload as a raw number is not necessarily meaningful on its own. Nonetheless, measuring actual PHN caseloads against appropriate benchmarks would allow Foster Care and Children's Services managers to monitor trends, as shown in Figure 4. The Health Agency could then identify caseload variances that could serve as indicators of potential inefficiencies or the need for staffing changes.

Rather than rely only on caseload numbers that Foster Care and Children's Services managers deem insufficient, the Health Agency could also measure case complexity as part of its caseload monitoring to help assess PHN efficiency and the appropriateness of PHN staffing. Case complexity refers to how much work a particular case is likely to involve—for instance, depending on whether a client's needs are standard or complex. For example, as we indicated earlier, Children's Services PHNs are responsible for providing transition care planning for clients who will age out of the program at 21 years old and will need to become responsible for managing their own medical care. For some clients, this may require a PHN only to mail an informational packet. For other clients, however, it might involve multiple interactions beginning at age 14 and may include phone calls and face-to-face contact. A case complexity measure would allow managers to assess levels of client need and anticipate the amount of work that cases of differing complexity might involve.

As we described earlier, San Diego County's Children's Services currently assigns each PHN a roughly equal number of cases, using an alphabetical list of clients. Unlike San Diego, Los Angeles County's Children's Services program uses a case complexity measure to sort cases according to levels of client need. The program's associate medical director told us that Los Angeles County piloted its case complexity measure with a target group of clients and nurses starting in 2014. In a journal article about the pilot project that the associate medical director coauthored, she explained that the measure categorizes cases as standard or complex based on the anticipated amount of work required to meet a client's needs. For instance, a standard case involves responding to patient inquiries and performing an annual case review, whereas a complex case involves developing a nursing care plan for a client and performing quarterly and annual case reviews.

Los Angeles County's Children's Services program uses a case complexity measure to sort cases according to levels of client need.

According to the article, Los Angeles County's Children's Services nurses participating in the pilot reported overall satisfaction with their work and felt their caseloads were manageable. The associate medical director told us that Los Angeles County now uses the measure for all Children's Services patients. Although she told us average caseloads were as high as 1,000 in 2017 and between

700 and 800 in March 2018—which are comparable to San Diego County's average caseloads—the case complexity measure gives Los Angeles County an additional tool for monitoring and adjusting caseloads. According to the medical director of San Diego County's Children's Services, a case complexity measure would promote a more equitable division of labor than the program's current caseload distribution system.

Similarly, although the Health Agency does not currently use a case complexity measure to assess or distribute work in Foster Care, the branch chief who oversees Foster Care said that participants in a multiyear quality improvement project, including PHNs, have held preliminary discussions about developing a case complexity measure. Such a measure could help Foster Care assess whether variations like those we saw in regional PHN caseloads are reasonable based on the varying amounts of work that particular cases require.

Overtime may also be an indicator of PHN efficiency. According to its group human resources director, the Health Agency as a whole does not track PHNs' overtime hours and leaves the decision to monitor overtime to its programs or regions. However, the Health Agency could use overtime data to help identify whether it has enough PHNs to complete their work within a normal work period and thus whether PHN staffing is adequate. For example, our analysis of the Health Agency's overtime data revealed that PHNs' overall overtime hours over the last three fiscal years were generally reasonable, but that a few PHNs worked high amounts of overtime. For example, in 2017, four PHNs worked from 489.5 to 616 hours of overtime, while the average PHN overtime that year was 43.7 hours. Two of these four PHNs worked in the Epidemiology and Immunization Services Branch. The other two worked in the Public Health Preparedness and Response Branch and the Tuberculosis Control and Refugee Health Branch. We discuss overtime in relation to the hepatitis A outbreak on page 21. If the Health Agency were similarly examining overtime, it could identify averages and outliers, which could aid it in assessing whether it has a sufficient number of PHNs and in detecting workload issues that may cause outliers to exist.

The Health Agency has a resource it can use to develop efficiency measures using factors such as PHN caseload, case complexity, and overtime that can better help it ensure and demonstrate the efficiency and adequacy of its PHN staffing. Specifically, in 2014 San Diego County established the position of chief nursing officer to direct the Health Agency's nursing programs and to plan, coordinate, implement, and evaluate countywide nursing standards and practices. These standards could include efficiency standards. The chief nursing officer told us she is working on a project that addresses a collection of quality assurance measures to make more informed

staffing decisions, although she confirmed that the Health Agency does not yet collect or analyze PHN workload information from its programs and regions. And while she acknowledged that there are no current required standards for measuring PHN workloads, she agreed that the lack of PHN efficiency measures means the Health Agency cannot demonstrate that its PHN staffing is appropriate. By using the Health Agency's existing information, such as the PHN case assignment and overtime data we used to perform our analysis, and developing a case complexity measure to promote a more equitable division of labor, the chief nursing officer could develop and implement efficiency measures and monitor them against appropriate benchmarks to help assess the Health Agency's PHN staffing. The chief nursing officer agreed that the Health Agency would benefit from using PHN efficiency measures that would allow it to understand how its PHN resources are allocated and assess whether the Health Agency is best meeting its clients' needs.

Recommendation

To better ensure and demonstrate that it efficiently meets public health needs of at-risk county residents, and that it employs the appropriate number of PHNs in the right locations to address those needs, the Health Agency should measure and assess PHN efficiency. Specifically, the Health Agency should direct the chief nursing officer to begin developing and implementing PHN efficiency measures by January 1, 2019. These measures could address such factors as caseload, case complexity, and overtime.

The Health Agency Implemented Its Draft Surge Plan to Respond to the Recent Hepatitis A Outbreak

Key Points

- Two reports assessing the county's performance in responding to the hepatitis A outbreak did not identify concerns related to the Health Agency's use of its PHNs in response to the outbreak. The Health Agency used its draft Public Health Personnel and Infrastructure Surge Capacity Plan (surge plan) as a framework for responding to the hepatitis A outbreak; the surge plan provided a structure for addressing increased demand for PHN resources in response to public health threats. The Health Agency finalized its surge plan in June 2018.

- San Diego County used both its own PHNs and temporary staff to respond to the hepatitis A outbreak. Our review of the Health Agency's data revealed that 92 PHNs worked overtime as part of the hepatitis A response and, according to its after action report, the county also used 158 temporary staff. Billing summaries show that temporary nurses worked nearly 6,800 hours during the response to the outbreak.

The Health Agency's Surge Plan Provided the Framework for Assigning PHN Resources to Address the Hepatitis A Outbreak

As we mentioned in the Introduction, San Diego County experienced an outbreak of hepatitis A in 2017. While our audit was ongoing, two San Diego County entities published reports assessing the county's response to the hepatitis A outbreak. San Diego County released its after action report on May 10, 2018, and the grand jury's report is dated May 17, 2018. Both reports identified concerns and made recommendations to improve the county's response efforts for future public health emergencies; however, neither report criticized the Health Agency's use of its PHNs in responding to the hepatitis A outbreak. We reviewed these reports and analyzed PHNs' involvement in responding to the hepatitis A outbreak.

According to its after action report on the hepatitis A outbreak, the county implemented Public Health Services' surge plan to respond to the hepatitis A outbreak. Specifically, the after action report stated that the Health Agency used the surge plan's protocols to engage and train nurses beyond county staff. The surge plan, which was in draft form throughout the outbreak, states that it is to be used to meet work demands specific to disease outbreaks and public health situations in which the need for screening and investigational activities exceeds the Health Agency's current capacity and that personnel eligible to meet surge needs may include any nurse the county employs who demonstrates compliance with the surge plan's training and other standards.

The surge plan describes three levels of response to public health threats and hazards. In an *episodic*, or short-term, surge, a surge team from Public Health Services can meet demand in 80 percent of events lasting two to four weeks. In a *sustained*, or long-term, surge, which can last for more than four weeks, a surge team will not be able to meet the event's demand for services and will need temporary staffing solutions, which can include additional nursing support. In a *disaster* or *public health emergency*, categories used to describe large-scale events that exceed department staffing levels, Public Health Services can require staff in its branches and regions to assist and may require mutual aid from jurisdictions outside the county, including federal or state resources.

On September 1, 2017, San Diego County's public health officer declared the hepatitis A outbreak to be a local public health emergency, which the county board of supervisors ratified later that month. The county then activated its medical operations center and used a centralized staff of schedulers and staffing coordinators for the response effort. According to a PHN supervisor in the Public Health Preparedness and Response Branch, the Epidemiology and Immunization Services and Public Health Preparedness and Response branches primarily managed the scheduling and staffing of immunization events for the outbreak.

San Diego County's public health officer declared the hepatitis A outbreak to be a local public health emergency.

These events included providing vaccines at medical and social service provider sites and staffing foot teams in which, according to the county's after action report, PHNs worked with public safety officers and social workers to locate and vaccinate homeless individuals in the field.

The Public Health Preparedness and Response Branch PHN supervisor also stated that the Health Agency appointed a PHN surge team coordinator in each region to coordinate local hepatitis A response events and schedules, in accordance with the surge plan. The after action report stated that the total number of county PHNs assigned to the outbreak ranged from 100 to 132. According to the grand jury report on the hepatitis A outbreak, new instances of hepatitis A decreased after the local emergency was declared, dropping from 80 new cases in the county in September 2017 to 34 new cases in October 2017. The PHN supervisor told us that the Health Agency discontinued its use of the medical operations center shortly after the

public health emergency was repealed in January 2018; however, the county continued to provide vaccinations at public health centers, jails, and locations where high-risk individuals congregate.

To understand the extent to which responding to the hepatitis A outbreak affected the Health Agency's PHNs, we interviewed Foster Care and Children's Services PHNs about their involvement in the hepatitis A response, examined the overtime hours that PHNs from all Health Agency branches worked from July through December 2017 as part of the hepatitis A response efforts, and assessed PHN responses to our survey regarding the impact of the outbreak on their regular workloads. We determined that PHNs from Foster Care and Children's Services were not heavily involved in the outbreak response efforts. According to PHN supervisors in their respective programs, Foster Care PHNs were not used for response efforts, and at least five of the 25 Children's Services PHNs were temporarily reassigned for short periods of time. The PHN supervisor for Foster Care told us it was her understanding that Foster Care PHNs were not used because of requirements associated with their funding source as well as the priority for increasing compliance rates for health and dental examinations. The PHN supervisor for Children's Services stated that Children's Services PHNs who were not assigned to the outbreak picked up the regular caseload work for PHNs who were, and that outbreak assignments affected PHNs' ability to meet deadlines for eligibility determination in some cases.

Furthermore, the Health Agency's data showed that 92 PHNs worked overtime as part of the hepatitis A response. The average hepatitis A-related overtime per PHN in 2017 was 29 hours, or less than five hours per month. However, the actual overtime worked ranged from less than one hour to 361 hours per PHN. An Epidemiology and Immunization Services Branch PHN supervisor worked 361 hours of overtime related to the hepatitis A response, or an average of about 60 overtime hours per month. In fact, the three PHNs who worked the most overtime hours for the hepatitis A outbreak response—more than 212 overtime hours each and collectively nearly one-third of the total hepatitis A overtime that PHNs worked—were PHN supervisors in the Epidemiology and Immunization Services or Public Health Preparedness and Response branches. Given the large scale of the outbreak, we do not consider the average of 29 overtime hours worked over six months by PHNs excessive.

In their responses to our survey, some PHNs criticized the Health Agency for how it handled the hepatitis A outbreak. Specifically, 10 PHNs raised concerns related to the Health Agency's management of the outbreak, including five with concerns related to PHNs' roles as part of the response effort. One of the five PHNs stated that when there is an emergency like the hepatitis A outbreak, the Health

Agency should "have a plan in place rather than taking nurses from current positions, leaving current programs and remaining staff to suffer." Furthermore, 50 of 71 PHNs (70 percent) responded "yes" to our survey question about whether the hepatitis A emergency affected their ability to maintain their normal caseload or workload.

Concerns regarding caseloads notwithstanding, protecting the public's health is one of PHNs' key roles. Directors of Public Health Nursing, an organization of the directors of nursing within local California health jurisdictions that provides input to the California Department of Public Health, the Legislature, and others on health issues, describes protecting the public's health during disasters or emergencies as a main role of public health nursing. Specifically, the organization states that providing mass vaccinations for disease outbreaks, pandemic influenza preparedness, seasonal immunizations, and other large-scale disease prevention events and exercises is a key activity of PHNs. Based on this description of PHNs' roles, San Diego County PHNs' activities in responding to the hepatitis A outbreak were not outside the scope of their work, despite the impact those activities may have had on their regular caseloads.

Furthermore, to help the county with its hepatitis A response and to support its vaccination efforts, the Health Agency issued requests for quotation to obtain temporary nurses for its regions in August 2017. According to its after action report, San Diego County used an additional 158 staff for vaccination efforts as follows: 121 contract nurses, seven nurses from its intermittent worker list, and 30 Medical Reserve Corps nurses. Furthermore, according to a PHN in its Epidemiology and Immunization Services Branch, the Health Agency contracted with hospitals and fire departments for an additional 131 vaccination staff. Health Agency billing summaries show that temporary nurses worked nearly 6,800 hours responding to the outbreak, work that likely reduced the amount of time that the Health Agency's PHNs needed to spend on outbreak response efforts.

Although the Health Agency appears to have followed its surge plan during the hepatitis A outbreak, the plan was in draft form during the outbreak. The Health Agency finalized the surge plan on June 15, 2018, and a PHN supervisor told us that the Health Agency will assign the plan to PHNs as required reading. Distributing the surge plan to the Health Agency's PHNs and training them on its protocols will better ensure that PHNs understand their responsibilities during future public health emergencies.

Recommendation

To better ensure that its PHNs are prepared for future public health emergencies, the Health Agency should distribute its surge plan to its PHNs and train them on its protocols.

OTHER AREAS WE REVIEWED

To address the audit objectives approved by the Joint Legislative Audit Committee (Audit Committee), we looked at several other issues. Specifically, we reviewed the Health Agency's practices for recruiting and hiring PHNs, including examining its PHN vacancies. We also assessed the sufficiency of its financial resources regarding PHN staffing. Below are the results of our reviews.

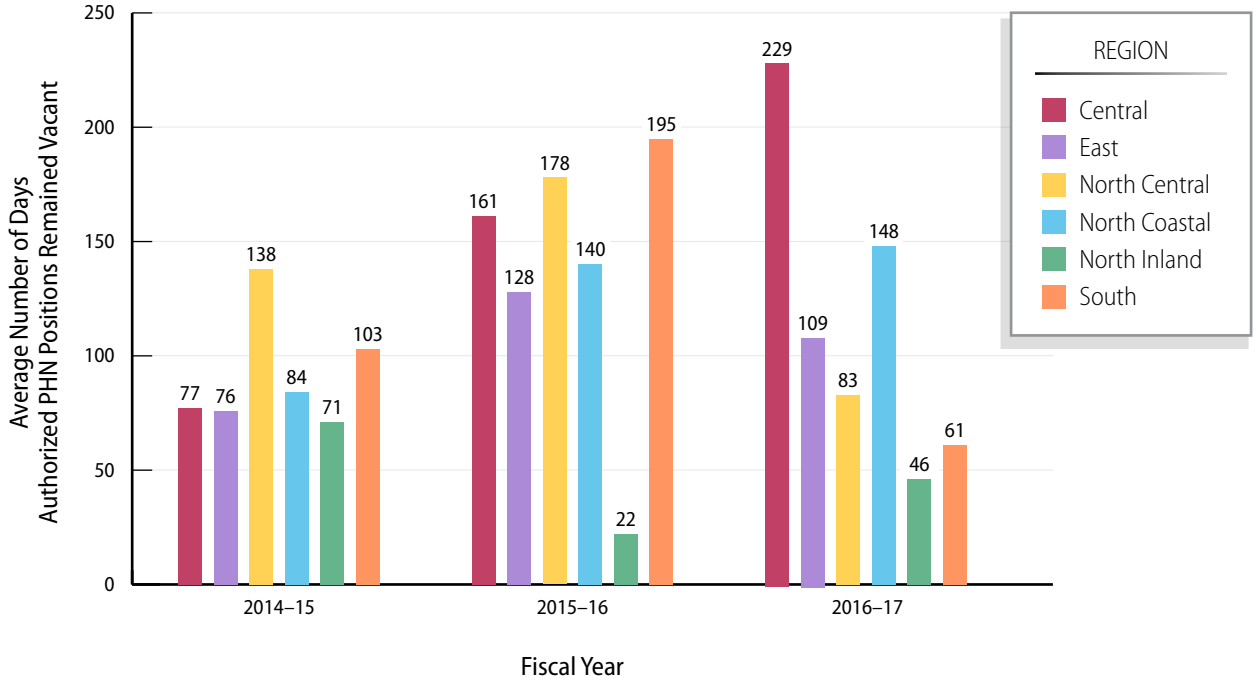
The Health Agency Uses the County's Civil Service Framework to Fill Its Vacancies and Relies on the County for Formal Recruiting

San Diego County's civil service practices and procedures require the Health Agency to fill its PHN vacancies from a list established through the county's certification process, wherein names of eligible candidates are provided to the Health Agency based on the Health Agency's criteria. According to its group human resources director, the Health Agency uses the county's civil service hiring and recruitment processes because the Health Agency is not a separate entity. The Health Agency appears to have an adequate supply of qualified PHN applicants: its group human resources director reported that the county has had a qualified candidate pool for the PHN classification that meets the definition of a full certification list under the civil service rules. For example, from September 12, 2016, to March 24, 2017, 117 people applied for a PHN position, of which 90 qualified and were placed on the civil service list, and from which the Health Agency hired 12 PHNs. Similarly, from March 27, 2017, to November 10, 2017, 142 people applied for a PHN position, of which 107 were placed on the list, and from which the Health Agency hired 13 PHNs.

The group human resources director also told us that although San Diego County formally recruits on its behalf, the Health Agency coordinates recruitment jointly with the county's human resources department. She said this recruitment outreach includes a strategy to reach out to local colleges and that the Health Agency also occasionally attends job fairs at local universities by sending one or two PHNs alongside the county human resources representative to provide specialized information to prospective applicants. She also told us that the Health Agency recruits at colleges in regions that have higher PHN vacancies. For example, when the North Coastal and North Inland regions struggled with PHN vacancies, the Health Agency recruited at California State University San Marcos, located nearby.

In addition to reviewing the Health Agency's practices for recruiting PHNs, we examined its PHN vacancies during fiscal years 2014–15 through 2016–17. The vacancy rate for PHN positions as of October 31 was 9 percent in 2015 and 2016, and 12 percent in 2017. Although these rates were comparable to vacancy rates for other public health organizations we identified, the Health Agency does not have a target vacancy rate that it uses to monitor PHN staffing. Because the Health Agency was working toward filling its vacancies, we also looked at the amount of time it took the Health Agency to fill its PHN vacancies over our audit period. According to its group human resources director, the Health Agency does not have a benchmark regarding the amount of time it should take to fill a PHN vacancy; however, she said one could expect it to take four to six months. On average over the three years we reviewed, we found that the Health Agency filled its PHN vacancies within four months. However, as indicated in Figure 6, the annual average amount of time to fill vacancies exceeded this time frame in at least one year for all but one of the six regions.

Figure 6
Time to Fill PHN Positions Varies Significantly by Region



Source: Analysis of Health Agency's human resources data.

We discussed the seven positions that were vacant for longer than 220 days with the Health Agency, who identified mitigating circumstances for each instance. According to its group human resources director, the Health Agency reclassified four positions and then filled three of the positions within four months of reclassification; had to restart recruitment towards the end of the hiring process for two positions because one candidate declined an offer and another failed to provide a PHN certificate; and took extra time to fill the seventh position because the position was hard to fill—it required specialized skills and knowledge—and at the time it became vacant, the hiring manager was covering for a branch chief and therefore had limited time to conduct interviews.

The Health Agency's Financial Resources for PHNs Appear Adequate

Based on our review of financial information from Public Health Services branches and each of the Health Agency's regions for the past three fiscal years, we did not find financial impediments that would prevent the Health Agency from filling its 192 currently authorized PHN positions to meet the needs of its programs. According to data provided by the Health Agency, state (including realignment) and federal money make up the primary funding sources for programs that employ PHNs, although San Diego County also provides county and miscellaneous fund revenue. According to its finance officer, the Health Agency has some flexibility in how it budgets and recognizes realignment revenue, and it tries to ensure that each division as a whole stays within budget rather than that individual programs stay within budget.

We also specifically reviewed the funding sources for the Foster Care and Children's Services programs. State and federal funds make up the primary sources for these programs. San Diego County's contributions are matched by these state and federal funds at percentages dictated by Health Care Services guidelines. Each year, Health Care Services sends a letter to Foster Care and Children's Services describing their applicable federal and state allocations. According to their respective administrative coordinator and administrative manager, Foster Care spends its entire state allocation annually and draws federal funding based on the percentage of time each staff member spends on foster care duties, while Children's Services does not always spend its entire annual state allocation due to vacancies. The programs' administrators submit annual staffing and services budget worksheets to Health Care Services listing the number of PHNs and other program employees and the total number of cases for each program. Health Care Services requires the Health Agency to comply with all federal, state, and relevant Health Care Services rules pertaining to the respective program as a condition of

accepting allocated funds. Importantly, the state and federal funding sources for Foster Care limit PHN activities to administrative and case management functions; for this reason, the Health Agency did not allow Foster Care PHNs to participate in responding to the hepatitis A outbreak, as we discussed on page 21.

SCOPE AND METHODOLOGY

The Audit Committee requested that the California State Auditor audit San Diego County's Health Agency to determine whether adequate levels of county PHNs are available to appropriately serve the residents of San Diego County, including underserved and at-risk populations. Table 3 lists the objectives that the Audit Committee approved and the methods we used to address them.

Table 3
Audit Objectives and the Methods Used to Address Them

	AUDIT OBJECTIVE	METHOD
1	Review and evaluate the laws, rules, and regulations significant to the audit objectives.	Reviewed relevant laws, policies and procedures, industry standards and best practices, and contracts and memoranda related to PHN staffing.
2	Determine whether the Health Agency is meeting its statutory obligation to provide care and appropriate staffing levels to San Diego County's children in foster care by:	• Evaluated the management controls the Health Agency has in place to ensure that it provides adequate care to the county's children in foster care. • Identified the caseload and other metrics that the Health Agency records and how it uses them to inform decision makers, including about allocating PHN staff. • Identified and calculated average foster care caseloads for the Health Agency's PHNs on July 1 of 2015, 2016, and 2017 and compared them to state benchmarks. • Reviewed California Child Welfare Indicators Project data to identify the statewide trend in the number of foster care youth. • Interviewed key personnel to determine whether the Health Agency monitors the ratio of foster children to PHNs and what actions, if any, it has taken to reduce the ratio of foster children to PHNs. Foster Care managers did not identify any specific action the Health Agency has taken to reduce the ratio of foster children to PHNs. • Surveyed and interviewed Foster Care PHNs to determine whether they were aware of any instances in which clients were negatively affected as a result of the Health Agency's PHN staffing practices.
	a. Identifying the average foster care caseload for the Health Agency's PHNs over the last three years.	
	b. Identifying what actions, if any, the Health Agency has taken to reduce the ratio of foster children to PHNs.	

continued on next page . . .

	AUDIT OBJECTIVE	METHOD
3	Evaluate the Health Agency's allocation of its PHN resources by determining:	Because average caseloads vary significantly depending on the programs to which PHNs are assigned, calculating an average caseload for all Health Agency PHNs collectively is not meaningful. Therefore, other than our assessment of Foster Care as part of Objective 2, we focused most of our work for this objective primarily on Children's Services, a program for which 81 percent of PHNs responding to our survey said high caseloads limited their effectiveness.
	a. Whether the Health Agency's PHN allocations comply with state guidelines and time frames. Further, identify the average caseload for the Health Agency's PHNs over the last three years.	• Interviewed key staff and reviewed program policies, procedures, and internal guidelines and time frames. • Calculated average caseloads for Children's Services on July 1 of 2015, 2016, and 2017 and compared them to state benchmarks.
	b. To the extent possible, whether the Health Agency's PHN allocations are appropriate in relation to current public health impacts.	• Interviewed key personnel to identify recent public health events that could affect PHN allocations. Health Agency personnel identified the 2017 hepatitis A outbreak as the most severe event; we therefore focused our work for this objective on this event because it was ongoing during our audit period. • Examined the Health Agency's surge plan and interviewed key staff regarding the plan, the Health Agency's use of PHNs, its contracting of temporary nurses, and overtime issues related to the 2017 hepatitis A outbreak. • Reviewed responses to our survey of all PHNs in relation to the 2017 hepatitis A outbreak. • Analyzed PHNs' overtime data for January 1, 2015, through December 1, 2017. • Examined San Diego County's after action report and the 2017/2018 grand jury report related to the hepatitis A outbreak.
	c. Whether the Health Agency has adequate financial resources to address PHN staffing deficiencies, if any exist.	• Analyzed the Health Agency's budget requests, and approved budgets, for Health Agency programs that employ PHNs for fiscal years 2014–15 through 2016–17. • Interviewed key personnel and reviewed relevant documents to determine what discretion the Health Agency has in using various sources of funding for its PHNs, and what the Health Agency has done to obtain additional financial resources for its PHNs for fiscal years 2014–15 through 2016–17.
4	Evaluate the Health Agency's PHN staffing levels and vacancies by determining:	• Interviewed key personnel and reviewed relevant documents regarding the Health Agency's hiring policies and procedures and recruiting programs. • Analyzed vacancies for the Health Agency's PHN positions for fiscal years 2014–15 through 2016–17.
	a. Whether the Health Agency has developed and implemented recruiting programs, policies, procedures, and hiring practices to ensure there are appropriate levels of county PHNs available to serve the public.	
	b. Whether the Health Agency has adequately staffed its facilities with PHNs and filled its PHN vacancies.	
5	Review and assess any other issues that are significant to the audit.	Surveyed the 171 PHNs the Health Agency employed as of January 3, 2018 regarding their perspectives on the audit's objectives.

Source: Analysis of the Audit Committee's audit request number 2017-124, planning documents, and information and documentation identified in the table column titled *Method*.

Assessment of Data Reliability

In performing this audit, we obtained electronic data files extracted from the data sources listed in Table 4. The U.S. Government Accountability Office, whose standards we are statutorily required to follow, requires us to assess the sufficiency and appropriateness of computer-processed information that we use to support our findings and conclusions. Table 4 describes the analyses we conducted using data from these sources, our methods for testing, and the results of our assessments. Although these determinations may affect the precision of numbers we present, there is sufficient evidence in total to support our audit findings and conclusions.

Table 4
Methods Used to Assess Data Reliability

DATA SOURCE	PURPOSE	METHOD AND RESULT	CONCLUSION
Social Services Child Welfare Services/Case Management System	To determine the number of foster care cases per PHN at specific points in time from January 1, 2015, through December 31, 2017.	• Performed data-set verification procedures and electronic testing of key data elements and did not identify any significant issues. • Did not perform accuracy or completeness testing on these data because physical source documents did not exist during our audit period.	Undetermined reliability for this audit purpose. Although this determination may affect the precision of numbers we present, there is sufficient evidence in total to support our findings, conclusions, and recommendations.
Health Agency Kronos	To determine the annual number of overtime hours per PHN from January 1, 2015, through December 31, 2017.	• Performed data-set verification procedures and electronic testing of key data elements and did not identify any significant issues. • Did not perform accuracy or completeness testing on these data because physical source documents did not exist during our audit period.	Undetermined reliability for this audit purpose. Although this determination may affect the precision of numbers we present, there is sufficient evidence in total to support our findings, conclusions, and recommendations.
Health Agency Oracle (General Ledger System)	To determine the funding amounts for selected programs with PHNs for fiscal years 2014–15, 2015–16, and 2016–17.	• Performed data-set verification procedures and electronic testing of key data elements and did not identify any significant issues. • Did not perform accuracy or completeness testing on these data because physical source documents did not exist during our audit period.	Undetermined reliability for this audit purpose. Although this determination may affect the precision of numbers we present, there is sufficient evidence in total to support our findings, conclusions, and recommendations.
Health Agency PeopleSoft	To determine the number of days that PHN positions remained vacant and how long each PHN incumbent filled a position during the period January 1, 2014, through December 31, 2017.	• Performed data-set verification procedures and electronic testing of key data elements and did not identify any significant issues. • Did not perform accuracy or completeness testing on these data because physical source documents did not exist during our audit period.	Undetermined reliability for this audit purpose. Although this determination may affect the precision of numbers we present, there is sufficient evidence in total to support our findings, conclusions, and recommendations.

Source: Analysis of various documents, interviews, and data from the entities listed in this table.

We conducted this audit under the authority vested in the California State Auditor by Section 8543 et seq. of the California Government Code and according to generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives specified in the Scope and Methodology section of the report. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Respectfully submitted,

ELAINE M. HOWLE, CPA
State Auditor

Date: July 26, 2018

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For questions regarding the contents of this report, please contact Margarita Fernández, Chief of Public Affairs, at 916.445.0255.

County of San Diego

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DEAN ARABATZIS
CHIEF OPERATIONS OFFICER

July 2, 2018

Ms. Elaine M. Howle*
California State Auditor
621 Capitol Mall, Suite 1200
Sacramento, CA 95814

Dear Ms. Howle:

Audit Report 2017-124 validates the County of San Diego's (County) position that 1) the County effectively addresses the public health needs of its residents, through its public health nursing programs; 2) appropriately used its draft surge plan to address a county-wide hepatitis A outbreak; 3) uses the civil service framework to fill its nursing vacancies; and 4) has adequate financial resources for its public health nurses.

This audit originated at the request of Senator Ben Hueso who, on August 14, 2017, made the following assertions in his written request to the Joint Legislative Audit Committee:

> "The consistent lack of adequate staffing levels of public health nurses contributes to persistent health related problems in communities and can lead to a public health crisis if not remedied." (1)
>
> "[S]taffing deficiencies place our community in jeopardy and significantly limit healthcare access for underserved and at-risk populations."
>
> "[M]any foster youth fail to receive basic health screenings and routine medical visits as a result of the chronic understaffing of public health nurses within HHSA."
>
> "As a result of the ongoing shortage of public health nurses, HHSA has been slow to respond to the Hepatitis A outbreak."

Nothing in the audit report supports any of these statements. (1)

Furthermore, we disagree with any claims that the County cannot sufficiently demonstrate that it needs more, or less, public health nurses—and our positive outcomes speak for themselves. (1) San Diego County has among the highest outcomes in numerous measures and we are one of only twelve counties in California accredited by the Public Health Accreditation Board receiving the highest possible ranking on 94 out of 100 assessment measures. Finally, although the report reinforced the positive outcomes by the County in its public health nursing program and hepatitis A response, the title of the audit report does not reflect this. (1)(2) Instead, the title implies that the County does not employ an adequate efficiency metric and, as a result, county residents are not appropriately served. (3)(4) The title does not acknowledge that a standard metric does not yet exist in California. As such, we are prepared to help the State develop an efficiency metric that could be used throughout California in order to create standardized tools for all statewide jurisdictions. The County will be contacting statewide organizations to pursue next steps related to this recommendation by your department.

Sincerely,

NICK MACCHIONE, FACHE
Agency Director

c: Helen Robbins-Meyer, Chief Administrative Officer

* California State Auditor's comments begin on page 35.

County of San Diego Health and Human Services Agency (HHSA) Response to the California State Audit Report 2017-124 entitled *San Diego County Health and Human Services Agency: It Cannot Demonstrate That It Employs the Appropriate Number of Public Health Nurses to Efficiently Serve Its Residents*

Finding 1: The Health Agency Cannot Sufficiently Demonstrate Whether It has the Appropriate Number of PHNs

Recommendation 1: To better ensure and demonstrate that it efficiently meets public health needs of at-risk county residents and that it employs the appropriate number of PHNs in the right locations to address those needs, the Health Agency should measure and assess PHN efficiency. Specifically, the Health Agency should direct the Chief Nursing Officer to begin developing and implementing PHN efficiency measures by January 1, 2019. The measures could address such factors as caseload, case complexity, and overtime.

Reponses: **The County of San Diego Health and Human Services Agency (HHSA) disagrees with the recommendation.**

HHSA is effectively providing public health services through our nurses to the residents of San Diego County as demonstrated by our outcomes when compared to statewide standards. No finding in the Audit Report disputes this. HHSA asserts that the outcomes associated with our PHNs, coupled with a reasonable overtime rate, is evidence of the County's efficiency. ①

Currently, the State does not provide standard measures for efficiency. A uniform statewide measure could allow all 58 counties to have comparable measures and share best practices. HHSA is interested in exploring a statewide effort to establish efficiency standards for consistency across California. ③ ④

In the absence of statewide efficiency measures, we place a high priority on outcomes to demonstrate our level of success in addressing the public health needs of our residents. For example, we provide timely health screenings and routine medical visits for the children in our Foster Care system. As stated in the Audit Report, in 2016-2017, 97% of foster children received timely preventive health examinations and 91% of foster children received timely preventive dental examinations in San Diego County. These results were achieved after the County conducted a comprehensive quality improvement project.

Administrators, managers and supervisors who oversee PHNs are responsible for on-going evaluation of practice and services, including monitoring caseloads. In particular, HHSA's Foster Care program has a robust process for monitoring PHN caseload. As of October 2015, the Heath Care Program for Children in Foster Care (HCPCFC) developed a work plan and established a workgroup to address caseload and PHN ⑤

assignments. As a result, HCPCFC meets with the regional leadership to discuss caseloads, caseload methodology, and to address concerns and challenges on a regular basis. PHN overtime is regularly monitored by the units, sections or branches to ensure they are meeting their own operational needs. As the Audit Report illustrates, "overtime data revealed that PHNs' overall overtime hours over the last three fiscal years were generally reasonable" with few outliers.

The County, for its part, will bring this recommendation to the attention of our statewide associations to explore if a case complexity/acuity tool would be a valuable resource for all public health departments in California. Moving forward, we fully support and look forward to participating in a State-driven effort to establish uniform efficiency standards across California. (4)

Finding 2:

The Health Agency Implemented Its Draft Surge Plan to Respond to the Recent Hepatitis A Outbreak

Recommendation 2:

To better ensure that its PHNs are prepared for future public health emergencies, the Health Agency should distribute its surge plan to its PHNs and train them on its protocols.

Response:

The County of San Diego Health and Human Services Agency (HHSA) agrees with this recommendation.

We will continue to distribute the Public Health Personnel and Infrastructure Surge Capacity Plan (Surge Plan) and train our public health nurses. During the hepatitis A outbreak, the draft Surge Plan was implemented and the appropriate PHNs received training on their roles and responsibilities. Consistent with the *County of San Diego Hepatitis A After Action Report*, the County is committed to ensuring public health staff members are trained in emergency management structures and roles to enhance their readiness to respond to a public health emergency. The 2018 Surge Plan contains guidance for ensuring all necessary individuals are provided training at regular intervals. The County currently provides quarterly trainings for nurses as well as annual mass care/shelter trainings and 'Point of Dispensing' trainings. Additional trainings are provided on an as-needed basis.

As mentioned in this report, neither the *County of San Diego Hepatitis A After Action Report* nor the *2017/2018 San Diego County Grand Jury Report,* dated May 17, 2018, had any concerns with the use of PHNs in responding to the hepatitis A outbreak. Further, the San Diego County Grand Jury commended Public Health Services and PHNs for the creation of the innovative 'foot team' approach for providing vaccinations for unsheltered individuals living in difficult-to-reach areas. As a result of the collaborative effort of County PHNs and community health care partners, 162,253 hepatitis A vaccinations have been administered countywide, as of June 6, 2018.

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COMMENTS

CALIFORNIA STATE AUDITOR'S COMMENTS ON THE RESPONSE FROM SAN DIEGO COUNTY'S HEALTH AND HUMAN SERVICES AGENCY

To provide clarity and perspective, we are commenting on the response to our audit report from the Health Agency. The numbers below correspond to the numbers we placed in the margin of the Health Agency's response.

As we state on page 9, because the Health Agency does not consistently use available information such as case assignment data to measure PHN efficiency and assess its PHN staffing assignments, it cannot demonstrate that it employs the appropriate number of PHNs to efficiently serve its residents. In addition, as our report indicates on page 10, a large percentage of PHNs from two programs who responded to our survey reported that their caseloads were too high for them to effectively accomplish their jobs. Finally, as we report on pages 17 and 18, the Health Agency's chief nursing officer, who is responsible for planning, coordinating, implementing, and evaluating countywide nursing standards and practices, agreed during our audit that the Health Agency cannot demonstrate its PHN staffing level is appropriate. (1)

We stand by the title of our report. As we indicate on pages 9, 13, and 17, the Health Agency does not use available information such as case assignment, caseloads, or overtime data to monitor PHN efficiency and assess staffing. Consequently, it cannot demonstrate that it employs the optimal number of PHNs or allocates them in the right locations to efficiently serve county residents. Such efficiency is required under San Diego County's Code of Administrative Ordinances and the strategic plan for the Health Agency's Public Health Services programmatic department. (2)

We acknowledge on pages 13 and 18 that currently there are no required or generally accepted standards for measuring and assessing PHN caseloads and workloads. However, the California departments of Social Services and Health Care Services have developed caseload benchmarks for Foster Care and Children's Services that the Health Agency could use to monitor the adequacy of its PHN staffing until it develops its own efficiency measures. (3)

It is because there are no statewide efficiency measures for PHNs that we recommend San Diego County develop and implement its own. We believe that the Health Agency's development of its own efficiency measures is the most expeditious way to ensure it employs the optimal number of PHNs in the right locations to best (4)

serve county residents. Therefore, we stand by our recommendation that the Health Agency should direct its chief nursing officer to begin developing and implementing PHN efficiency measures by January 1, 2019.

5 Evidence we obtained during our audit did not support the Health Agency's claim that its Foster Care program has a "robust process" for monitoring caseloads. As we report on page 13, the Health Agency does not require its managers to monitor each PHN's caseload. Furthermore, as we note on pages 17 and 18, the chief nursing officer confirmed that the Health Agency does not collect or analyze PHN workload information from its programs and regions. Although the Health Agency provided summary PHN caseload information aggregated by region and unit for the Foster Care program and described how regional office staff discuss their caseloads, it provided no information regarding how program administrators monitor PHN caseloads across regions or programs—which would be an indication of the *efficiency* of a program's PHN staffing. We stand by our conclusion as stated on page 9 that the Health Agency does not consistently use available information—including caseloads—to measure PHN efficiency and help assess PHN staffing assignments.